UNIVERSITY COLLEGE LONDON

ANNUAL REPORT 1977-1978

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B.SC., M.B., B.S.

PROFESSOR D. W. JAMES†

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* until 30 April 1978

† from 1 May 1978

NOËL ANNAN

Provost, University College London, 1966-1978
Vice-Chancellor, University of London

In March 1978 Noël Annan, Provost for the past twelve years, was elected Vice-Chancellor of the University of London and took office in September.

The first Vice-Chancellor to have emerged in that role from its oldest and largest School, he will preside over the University during the difficult transition arising from the Murray Committee report and the University of London Act of 1978. The Schools will expect him to release more of the enormous potential for good in the University while increasing the cost-effectiveness of its central organs. It is a reforming task of frightening magnitude and we wish him well.

But he is now well trained for the task. He read History at King's College, Cambridge, and, after a distinguished war career and having been elected a Fellow in 1944, he returned there in 1946 as a don.

Ten years of superb teaching saw him elected at only thirty-nine as the Provost of King's. In his second ten years at King's he was drawn from the scholarship he loves into administration and the chairing of reforming commissions which he probably likes much less.

When Ifor Evans retired from University College London in 1966 and Noël Annan took on his second Provostship, the days of plenty in the universities were almost over and University College was clearly over-expanded in some areas and over-stretched in others. He revelled in the great scholarship around him but recognised, sooner than most, that to match the changing times a painful redistribution of resources would be necessary. The first financial crisis was, by more recent standards, trivial, but it led him to think about the management structure necessary to support a community of scholars in diminished affluence. The 'robber baron' heads of department could still live comfortably but the day of the negotiating dean was at hand. Perhaps Noël Annan's greatest triumpt is that the structure which he created, on the base of a dedicated professional administration, has allowed the College to weather

in its stride each succeeding crisis so that he leaves a fully united and uniformly excellent group of scholars.

The process has not always been comfortable either for him or for the other members of the College; for one reason or another, it has worked. That it worked while he was fathering the Annan Report on Broadcasting and dealing with the subsequent criticism shows stamina of the highest order. Perhaps, whatever the views of medical science, there really is something in early morning swims followed by personally mixed salads and a modest amount of red wine. Certainly through all the difficulties his ebullient good humour persisted.

But to discuss Noël Annan without reference to his care for his students would be to ignore another of his great successes here. He has been dedicated to the genuine interest of the student body and that dedication, allied to our most civilized students, allowed us to pass almost serenely through the troubles of the late 1960s. That he should tackle single-handed the painful mediation at Essex shows clearly that his devotion to student affairs is not confined to our own.

What a climax it would be for Noël Annan's career in the University of London if he could return as Vice-Chancellor to the opening of a new Students' Union in a new Gordon Street Wing. Perhaps that is not an impossible dream!

THE REPORT FOR 1977-78

University College London 1828-1978

The beginning of the academic year celebrating the one hundred and fiftieth anniversary of the opening of the College was marked by the visit of Her Majesty Queen Elizabeth the Queen Mother, Chancellor of the University, who had graciously consented to receive an Honorary Fellowship. The ceremony of installation on 10 November 1977 was followed by speeches by the Provost and the Chancellor; afterwards, the Chancellor met members of staff and students who had gathered in the Housman Room.

In May 1978 the College threw open its doors and extended a warm welcome to the public at large and particularly to the Schools. The Sesquicentenary Exhibition, having as theme 'University College London – Past and Present' was inaugurated on 9 May at a ceremony in the Collegiate Theatre. The proceedings were opened by the Chairman of the College Council and the assembly addressed by Professor Joel Hurstfield, Astor Professor of English History, and by the Provost. The Exhibition was declared open by the principal guest, the Right Hon. Shirley Williams, Secretary of State for Education and Science.

The Exhibition was mounted in the Upper Hall, New Chemistry Building and Wates House and supplemented by Open Days in a number of Departments. Although the Exhibition could give visitors only an impression of the enormous range of the College's academic activities, it featured all the Faculties. University College Hospital Medical School joined with the Faculty of Medical Sciences to illustrate the development of medical teaching and research. By the time the Exhibition closed, on 18 May, it had been visited by parties from over thirty schools and by a wide cross-section of the public, no doubt encouraged by press reports and a four-page feature in the Times Higher Education Supplement.

To coincide with the Exhibition, the local branch of the Association of University Teachers arranged a series of special lectures on the theme 'The University Today', by Mr J.W. Scott,

College Librarian, Professor Steven Rose of the Open University, Lord Boyle, Vice-Chancellor of the University of Leeds and Professor Ralf Dahrendorf, Director of the London School of Economics. Lunch-hour lectures were given by Professor R.L.F. Boyd, Professor J.H. Burns and Mr A. Tattersall, Secretary of the College. The Chamber Music Society held a successful concert and films were shown each day as part of the programme of supporting events.

During the sesquicentennial celebrations the College published a pictorial history by Mr N.B. Harte and Dr J.A. North of the History Department entitled *The World of University College London 1828-1978.* Copies may be obtained from the Publications Office at the College.

Charter, Statutes, Regulations for Management and Bill

The granting of the Royal Charter of Incorporation on 9 December 1977 marked the culmination of over ten years' activity. The main effect of the new Charter was that for the first time since 1907 the College was given legal status in its own right with a set of clearly defined objects instead of being incorporated in, and deriving its authority from, the University. The formal title of the College was changed from 'University of London, University College' to 'University College London' in recognition of its new status. A further consequence of the granting of the Charter was the creation of the office of Visitor to the College and it is to the College's great pleasure that the Master of the Rolls, Lord Denning, has accepted this office for himself and his successors. Statutes made pursuant to the Charter provide the College with the up-to-date instrument of government it has lacked for many years, including a clear statement of the powers attached to its statutory bodies and offices. Included among these powers is that of the major statutory body, now known as the Council in succession to the old College Committee, to make Regulations, complementary to the Statutes, for the detailed management of the College. The first Regulations for Management of the new College were passed at the inaugural meeting of the Council on 21 March 1978. Arrangements are now in hand for the transfer from the University to the College, by means of a Private Bill, of all the

properties attached to the College but currently vested in the University by virtue of the College's former incorporation in the University.

University College Hospital Medical School

Reunification of University College Hospital Medical School with the College, referred to in last year's Report, is awaiting completion of legal procedures. UCHMS have been advised that a Parliamentary Bill will be needed to effect the dissolution of the Scheme of Incoporation under the National Health Service Act 1946 by which the Medical School is governed and to transfer Medical School property to the College. Amendments to the Statutes under the new Charter granted to the College, which *inter alia* will permit representatives of UCHMS to take their places as full members of College standing committees, have been approved by the University and will shortly be submitted to the Privy Council. Implementation will be subject to enactment of the Bill. Representatives of staff and students of the Medical School have been welcomed as assessors on committees of the College as an interim measure from the beginning of this session.

Finances

Last year it was reported that in order to produce a balanced budget in 1977-78 it would be necessary, in addition to making economies in salary expenditure, to find a further saving of £508,000 from non-salary allocations. As an interim measure this session, reductions were made in Departmental Recurrent Grant and Library Grant and in funds for Maintenance of Premises.

The half-million pound shortfall is, as predicted, a continuing burden and during this session committees have spent many hours considering alternative ways of meeting a reduction of this amount in 1978-79. There is little scope for finding new methods of achieving so large a sum. Further economies in salary expenditure are seen as inevitable, although it is proposed to lessen the impact by recruiting 225 additional students over and above the growth of 242 in student load already predicted up to the year 1981-82; it has been assumed that the additional

numbers will bring in extra income of about £100,000. It is proposed to meet the balance of £400,000 partly by reduced spending on staff and partly by further reductions in Departmental Recurrent Grant.

No sooner had recommendations on these lines been made to the Academic Board, however, when it was learned from the University that the College could expect a supplementary grant from the University Grants Committee of £405,000 for the current year 1977-78. The plans were therefore reappraised and in July the Council accepted recommendations that from the supplementary grant a non-recurrent allocation of £183,000 should be made to the academic sector to provide some alleviation of the proposed 1978-79 economies, an allocation of £25,000 should be held in reserve for the Library and a sum of £133,000 should be restored to the Long-Term Maintenance Fund. The balance of £64,000 will be used to reduce the amount by which the deficit will need to be made good from accumulated reserves. The supplementary grant of £405,000 has at least provided a breathing space to enable the College to keep its expenditure within the bounds of income while the search for £400,000 of economies continues.

Over the past four years the universities have been obliged to live from hand to mouth without any clear notion of the level of income which they might expect even in the current year. It is hoped that this experience may have come to an end with the announcement by the UGC of grant levels up to 1981. But the outcome can only be judged against the correlation between grants to compensate for inflation and the extra costs involved in increases in salaries, wages and other expenditure.

Apart from this general issue which affects to a larger or smaller degree all institutions within the public sector, the greatest problem facing University College remains that of providing adequately for the replacement of the services in its buildings and the maintenance of their fabric. In common with all universities the burden of such costs has, particularly since 1974, increased disproportionately against other expenditure and it is clear that a permanent switch of 5 per cent or more of College income has to be made from academic activity to maintenance of buildings. In the past University College has, as

published statistics show, allocated a larger percentage of its income to academic activity than any other institution of higher learning in the United Kingdom. Nevertheless a transfer of this magnitude is bound severely to affect academic departments, especially when it has to be taken with the reduction in resources suffered since 1973-74.

The income in 1977-78 amounted to £20,202,311, an increase of £1,471,394 over 1976-77. Expenditure in 1977-78 was £20,305,094 inclusive of the cost of research borne by outside grants which total £3,548,940 compared with £3,132,052 in 1976-77. The number of these grants was 524. Capital grants announced for the year amounted to £110,953 compared with £78,991 for the previous year. Receipts against these and previous capital grants and capital expenditure amounted to £95,494 compared with £86,643 in 1976-77.

University College London Academic Services Unit

During the year a study was initiated of possible ways of increasing the income of the College against the background of general financial retrenchment in the university sector.

The conclusions of this enquiry, endorsed by the Council, fall broadly into three categories. It is proposed first that Departments should be encouraged to provide short courses, particularly those of a specialised nature, for which a full economic charge can be made. Secondly, the possibility is to be explored of increasing income from research contracts by transferring some part of Departments' energies to topics likely to provide adequate overhead contributions to the College. Finally, it is believed that there could be gain from such services as, for example, provision of technical and academic advice to newly-established colleges abroad.

The Council has agreed that the proposals relating to research and academic services should be implemented by establishing an Academic Services Unit. The Unit will foster research and development projects in liaison with industry and commerce both at home and overseas and in co-operation, where appropriate, with other universities. The Unit will also co-ordinate specialised services for new universities overseas needing assistance in their foundation and during their subsequent develop-

ment. The Director of the Academic Services Unit is Mr B.B. Nutt, Senior Lecturer in the Bartlett School of Architecture and Planning.

College Sites and Buildings

The outlook for building works in the College is a shade brighter now than it was last year, but there is still no indication from the University Grants Committee of any funds for the next stage of the College's plans for the redevelopment of the Rectangle. Some difficult decisions will need to be taken if no news is received by next session, when the UCRF 'decanting' building in Bedford Way will be completed and ready for occupation. Detailed planning is now in progress for moving the Departments of Geography and Psychology out of their present inadequate quarters into the new building. Moving two such large Departments will be a major operaiton, but it is hoped to start the move at Christmas and complete by Easter 1979.

The 91-room extension to Ifor Evans Hall, paid for by the Anonymous Donor, is also making good progress and will be ready for occupation early in 1979. The main block is almost completed and work has just started on the Club Room.

A number of improvements to buildings in the College is in hand, stimulated by the sesquicentennial celebrations. The various entrances have received new engraved slate name plates. A bigger change in the appearance of the Quadrangle is envisaged as the College has received from the University a special grant for the cleaning of stonework. This is a matter which has been considered over several years and has at times aroused controversy, but the decision to clean the stonework was taken in view of the successful results obtained on a number of other major building in London. A yet greater change is envisaged, provided that funds can be raised: the possibility of at last doing something about the Gower Street 'gap' to commemorate the Sesquicentenary. Various schemes have been put forward over the last sixty or seventy years, but have always proved abortive for one reason or another.

Two important conversion jobs commenced in the summer. One of these is the first phase of the College's plans for con-

centrating the Chemistry Department in the Christopher Ingold Laboratories in Gordon Street. The basement garage and the ground floor will be converted to accommodate the Department's workshops, reading room, seminar room, microanalysis laboratory and two research laboratories, thus freeing most of the basement and ground floor of the Old Chemistry Building for other purposes. The Chemistry electronics workshop has already moved into temporary quarters to allow the conversion of nearly half of the Old Chemistry basement for the College's new Computer Suite. This Suite is being designed to take the new GEC 4000 Series linked computer system, the equipment for which is already on order, so that the Computer Centre's ageing IBM installation can be phased out. One other small but important conversion has also started; the former Refectory Annexe off the South Cloisters is being adapted to house properly for the first time the College's print collection, referred to later in this Report.

Lastly, good news for sportsmen and women of both College and Medical School – the new Club Room and Bar at Shenley, paid for by UCHMS, was successfully completed and opened in January of this year.

The College Administration

In anticipation of the retirement of the College Secretary and of the Deputy Secretary (appreciations of whom appear in the Supplement to this Report), the Provost invited Mr S.W.C. Phillips, a member of the then College Committee, to review the organisation of the Administration prior to the appointment of a successor to Mr Tattersall. Mr Phillips recommended that the administrative work of the College should be carried out within four Divisions under the direction of the Secretary. His proposals were accepted by the Council with some modification in detail and take effect from September 1978. Two of the Divisions conform with the existing Bursar's and Accounts Departments, while the others cover the academic administration of the College and the day-to-day services including personnel administration, student accommodation, refectory and security. Reference is made in the Supplement to associated senior appointments from September 1978.

Staffing Matters

This year has seen three developments of some significance for various categories of the College staff. The Working Party on Trade Union Representation on College Standing Committees set up by the Committee on College Governance submitted its report during the session and, after further consideration by the main committee, the report was circulated to the trade unions for their views. The debate on this matter will continue next session.

Early in the session agreement was reached on a new national grading structure, rates of pay and standard conditions of service for manual and ancillary staff (excluding maintenance staff) working in universities. After consideration the University of London, and this College, decided to enter the scheme. The new rates of pay came into operation at the College in early July 1978.

First-year probationers, in particular, played a significant part in the College's training and development programme. The main features of the programme were assistance to new lecturers on lecturing techniques and sessions on small group teaching and student assessment. As a result of the experience gained during this year the Sub-Committee on the Training of Teachers is now developing a two-year programme which, in addition, will include new sessions covering additional aspects of university teaching.

Student Numbers

During the session 5,913 students were registered at the College. Of these, 3,882 were full-time undergraduates, an increase of 74 over the previous session. 1,375 of these undergraduates were newly admitted to first degree courses. The total postgraduate population decreased by 98 to 1,768 with a fall of 60 to 1,356 and 38 to 412 in full-time and part-time students respectively. The fall in full-time postgraduate numbers was confined, almost entirely, to self-financing U.K. students, who were badly hit by a 300 per cent increase in fees for the session. 52 per cent of the full-time postgraduates were follow-

ing taught courses while 75 per cent of part-time postgraduates were carrying out research for the M.Phil. or Ph.D. degree.

The College attracts almost one-fifth of its students from many overseas countries. 442 students normally resident in 31 Commonwealth countries and 741 from 65 other overseas countries registered during the session. 693 of these students from abroad were postgraduate.

41 per cent of the full-time undergraduates in attendance at the College this session lived in halls of residence or other accommodation provided by the College or the University and 23 per cent lived at home; the remainder were in lodgings or flats.

During the session teaching of the following postgraduate courses was discontinued: the College Diploma in Film Studies, the M.Sc. in International Relations, the M.A. in Modern English Language, the M.A. in History of Art, the Diploma in Design and Planning Education. A new undergraduate course leading to the B.Sc. in Mathematics and Physics was introduced.

Medieval Archaeology

With effect from 1 January 1978 teachers of medieval archaeology transferred from the Department of Scandinavian Studies to the Department of History where they form a distinctive group. Teaching of medieval archaeology in the College is primarily linguistically and historically based, rather than archaeological in the practical sense. The Department of History is therefore a natural home for staff of the group, who will benefit from the opportunities for developing links with medieval historians; students both of medieval history and of medieval archaeology will gain from the new connection between the two disciplines. To strengthen the teaching of medieval archaeology a third Lectureship is to be established from October 1978.

Bentham Project

The Bentham Edition, a project for the publication of Jeremy Bentham's books, correspondence and other papers, was initiated by the College in 1959 and since then has received financial support from the College in varying degrees. The

project also receives funds from the British Academy and the Social Science Research Council, in addition to contributions from the University of London towards publication costs. Between 1968 and 1971 five volumes were published by the Athlone Press and six more are planned for publication by the end of this decade. There is enough material for another twenty-five to thirty volumes.

Professor J.H. Burns has decided to resign the General Editorship of the project in September 1979, after holding it for eighteen years. Recent negotiations between the Bentham Committee and the University of Tulane, New Orleans, are expected to result in giving an effective Anglo-American character to the Edition for the future and the College this year has sought to define its relationship with the project. First, the College has agreed that the project should be regarded as a special inter-Departmental and inter-Faculty activity, in collaboration with Tulane, to be eligible for annual financial allocation in competition with the Departments and other academic activities. An appropriate contribution to running costs will be maintained and accommodation in College will be provided for staff of the project not earlier than the autumn of 1979. Secondly, the College has agreed to contribute permanently half the cost of an appointment of General Editor from October 1979 on condition that a permanent matching contribution is found from other sources. This offer has been made possible by generous support from the Faculties of Arts and Laws and by contributions from the Faculties of Science and Environmental Studies. Thirdly, an existing financial guarantee by the College is to be converted into an interest-free loan, repayable at the conclusion of the expected period of completion of publication of the eighteen or so volumes on which editorial and other preparatory work is in progress.

Computer Centre

The first two of six GEC 4082 machines which will form the basis of the College's new computer system were delivered in the Spring. Permanent accommodation, formed by adaptation of the basement in the Old Chemistry Building, will not be available until April 1979 and it is not possible to bring the new

equipment into full service before then. A comprehensive telecommunications system covering all parts of the College will also have been installed, to give access to the new computers. In the meantime the IBM 360/65 has continued to provide a general service and there has also been increasing use of other systems in the University. Further videotapes have been made, to assist with the teaching of various aspects of computer use.

Public Lectures

The following public lectures were among those arranged by the College during the session: Commonwealth Fund Lecture by Professor Don E. Fehrenbacher (Stanford) on: 'The Dred Scott Decision and its Consequences'; Freud Memorial lectures in Psychoanalysis by (i) Professor Hanna M. Segal on 'Psychoanalysis and the Freedom of Thought' (four lectures) and (ii) Dr J.H. Rey on 'Schizoid Personality Structures and Space-Time Factors' and 'The Dynamics of Psycho-Linguistic Structures'; Neale Lecture in English History by Professor A.G. Dickens (Institute of Historical Research) on 'The Early English Protestants – a social survey'; Newmarch Lectures in Economic Statistics by Professor A.S. Goldberger (Wisconsin) on 'Heredity, Environment and Socioeconomic Achievement' (two lectures); Lord Northcliffe Lectures in Literature by Dr Conor Cruise O'Brien on 'In Quest of Edmund Burke' (four lectures); Smith, Kline and French Laboratories Lecture in the Allied Health Sciences by Professor J. Murdoch Ritchie (Yale) on 'A Pharmacologist's Approach to the Sodium Channel'; Townsend Memorial Lecture by Professor Richard Wollheim on 'Adrian Stokes: Critic, Painter, Poet'. An inaugural lecture was given by Professor M.W. Swales (German) on 'Irony and the Novel: Reflections on the German *Bildungsroman'*.

The eighty-second Foundation Oration was delivered by Mr A.J.P. Taylor in the Collegiate Theatre on 13 March 1978. The subject of his oration was 'My Place in History'.

Publications

A list of publications of members of the College departments will be found on pp. 37-99. This is an impressive record and though no attempt is made here to summarise the research

projects on which the departments have been engaged during the session, many of them have attracted substantial grants from Research Councils and other grant-giving bodies. These are gratefully acknowledged in Appendix VI.

Schools Conference

This year's Schools Conference held on 13 and 14 April 1978, mainly in Ramsay Hall, was shorter than usual though no less successful than in the past. The organising committee's contribution to the College's economies programme was to sacrifice some of the social sessions normally included in the proceedings and to squeeze the remaining sessions into what turned out to be a crowded twenty-four hours. The basic framework of the Conference, consisting of the formal sessions on the six Faculties and of the visits to individual departments, remained intact. The response from the Schools both before and after the Conference was most encouraging and a straw vote taken at the final session even suggested that the visitors had preferred the shorter, more intensive programme to the traditional three-day format. It is too early to say on one year's evidence whether the new style of the Conference heralds the shape of things to come and the organising committee has decided to repeat the experiment in 1979, while keeping its options open. Meanwhile both the College and the Schools continue to find these ventures, long or short, of great value.

College Collections

The necessary programme of conservation and restoration, initiated by Professor White and Mrs Lightbown some five or six years ago, has continued, with the usual grant-in-aid from Finance Committee, and the end of Stage I (the initial first-aid work) is in sight. Stage II (a regular programme of work to prevent further deterioration) stretches into the future; but its prospects have been greatly enhanced by an important decision about the future location of the main Art Collection.

For years the prints and drawings have been badly housed, most recently in Flaxman Terrace, where a persistently leaking roof has caused damage and concern. Now it has been decided that the former Refectory Annexe shall provide a permanent

home for the Collection, a use for which the room was adapted in 1930 with the help of Lord Duveen.

Though limited display in the new room may be possible, what is intended is not an Exhibition Room as such although there is ample material to justify one. Instead, adequate and systematic storage is to be provided together with working and study facilities, so that curatorial work and serious research may be done in reasonable conditions. The project involves some building operations and the construction of purpose-built cupboards and other furniture; and an appeal, of modest proportions, has been launched. This appears to be going well. The College acknowledges with thanks the co-operation of the Fine Art society Gallery in Bond Street, which put on an exhibition of work by Slade artists in aid of the appeal.

Meantime the Curator has mounted the usual changing display in the Cloisters, with a special effort for the Sesquicentenary Exhibition in May which was much appreciated. She and others contributed also to a display in the Whistler Room of some of the College's greatest treasures. The Egyptology Department opened its storehouse of precious objects to the public during that Exhibition, and people were appreciative of the range and quality of the material shown. In Egyptology, too, conservation work has continued; but there is no sign of the next stage of the College redevelopment, which will at last provide adequate and secure housing for this Collection. Only minor improvements have been possible this year.

A small but significant and welcome gift of material by Mr R.J. Stopford has been added to the Egyptological Collection (*see* Appendix VI).

Association of Friends of University College London

During 1977-78 the Friends of University College authorised grants totalling £4,010 in support of the following projects: purchase of folding stages for entertainments for the Union (£400 plus loan of £600 repayable over three years); purchase of second-hand minibus for Cirkusact, a student drama group involved in community work (£500); New Print Room Appeal to enable work on the conversion of the room to house the College Collection of prints and drawings to begin (£2,000);

Kith and Kids' summer project 1978 to help mentally-handicapped children (£200); provision of flower tubs for the patio of Ramsay Hall (£50); purchase of bookcases and books for the Ifor Evans Hall Quiet Room (£200); purchase of a refrigerator for the Day Nursery (£60).

As reported last year, the Friends granted a total of £2,500 for the Sesquicentenary Exhibition.

The Friends continue to be asked for help in providing much to improve and enhance the quality of life in the College for staff and students. If they are to maintain their support, it is important that both membership numbers and the level of subscriptions and donations be increased.

SUPPLEMENT

HONOURS AND DISTINCTIONS

In the New Year Honours in 1978 Professor D.R. Bates, Professor of Theoretical Physics, Queen's University of Belfast, a former member of the staff of the Departments of Mathematics and Physics, was created a Knight Bachelor, and H.E. Marking, Chairman of the British Tourist Authority, a former student in the Faculty of Laws, was created a Knight Commander of the Royal Victorian Order. The C.B. was conferred on J.R. Ede, Keeper of Public Records, who held a part-time appointment in the School of Librarianship and Archives from 1957 to 1962, and the C.B.E. on H.R. Oakley, a member of the Council and of the honorary staff of the Department of Civil and Municipal Engineering, and on Professor R. Wilson, Perren Professor of Astronomy at the College. Former students similarly honoured were Professor D.J. Finney (Statistics), Director of the Unit of Statistics, Agricultural Research Council, and P.G. Greenham (Slade School), Keeper of the Royal Academy Schools.

In the Queen's Birthday Honours Dr A.H. Chilver, Vice-Chancellor of the Cranfield Institute of Technology, who held the Chadwick Chair of Civil Engineering from 1961 to 1969, was created a Knight Bachelor, and Sir Hugh Casson, President of the Royal Academy, a former student in the Bartlett School of Architecture, was created a Knight Commander of the Royal Victorian Order. The C.B.E. was conferred on W.S. Lewin, Consultant Neurological Surgeon to Addenbrooke's Hospital, Cambridge, Fellow of the Collge; on Professor H.C. Darby, lately Professor of Geography in the University of Cambridge and formerly Professor of Geography at the College, for services to the study of historical geography; and on Professor D.C. Hague, Professor of Managerial Economics in the University of Manchester, formerly Reader in Political Economy at the College. Former students similarly honoured were R.P. Pollard (Statistics), Chief Education Officer, Buckinghamshire County Council, G.R. Sanderson (French and Italian), British Council Representative to Spain; and Dr D.M. Wallace (Medical Sciences), Professor of Urology, Riyadh Medical School, Saudi Arabia, for services to British medical interests in Saudi Arabia.

The title of Honorary Fellow was conferred in 1978 on Sir Leonard Wolfson, Chairman and a Founder Trustee of the Wolfson Foundation, Managing Director, Great Universal Stores, and Chairman of the Great Universal Stores Merchandise Corporation.

The following were elected Fellows of the College in 1978: Peter Kingsley Archer, Q.C., M.P., Solicitor General; Professor Geoffrey Rudolph Elton, F.B.A., Professor of English Constitutional History, University of Cambridge; Professor Martin Froy, Professor of Fine Art, University of Reading; Arthur Hollman, F.R.C.P., Consultant Cardiologist and Physician in charge of the Cardiac Department, University College Hospital; Professor Douglas James Millen, F.R.I.C., Professor of Chemistry,

University College London; Michael John Milner, Director in charge of all American interests of Davy Powergas International based in Houston U.S.A.; Clare Mary Renod (née Francis), M.B.E., round the world yachtswoman; Professor Joseph Murdoch Ritchie, F.R.S., Eugene Higgins Professor and Head of Department of Pharmacology, Yale University; Professor Howard Harry Rosenbrock, F.R.S., Professor of Control Engineering, University of Manchester Institute of Science and Technology; Laurence Arthur Wigglesworth, Senior Lecturer and Tutor, Department of Mathematics, University College London.

Among the interesting and important appointments announced during the session were those of Professor A.B. Atkinson as a member of the Royal Commission on the Distribution of Income and Wealth, D.J. Foskett as Director of the University Library and Goldsmiths' Librarian, J.M.A. Lindon as a member, appointed by the Italian Ministry of Culture, of the National Committee for bicentenary celebrations in honour of Ugo Foscolo, and Professor J.E.C.T. White as a member of the Visiting Committee of the Royal College of Art.

Emeritus Professor Sir Harrie Massey, Sir Angus Paton and Professor M.G.P. Stoker were all re-appointed Vice-Presidents of the Royal Society, Professor Sir Andrew Huxley and Dr Ruth A. Sanger were elected to its Council, and Dr A. Boksenberg was elected to a Fellowship of the Society. Professor R.L.F. Boyd was appointed to the Council of the Science Research Council and Chairman of its Astronomy, Space and Radio Board, Dr R.J.H. Clark to its Panel on Inorganic Chemistry, Professor E.A. Ash was elected to the Fellowship of Engineering, Dr C.J. Lucas was elected a Fellow of both the Royal College of Physicians and of the Royal College of Psychiatrists, Professor Hannah Steinberg was elected a member of the Biological Council as the representative of the British Association for Psychopharmacology, and Professor A. Summerfield was elected President of the International Union of Psychological Science and of the International Social Science Council.

Two Fellows of the College, Sir Laurence Kirwan and Sir Angus Paton, became Fellows of Imperial College, Professor E.A. Ash was elected a Fellow of the City and Guilds Institute, and D.V. Lindley, formerly Professor of Statistics and Head of the Department of Statistics and Computer Science at the College, was appointed an Honorary College Fellow of University College of Wales, Aberystwyth.

Elections to foreign academies and societies included those of Professor J. Hurstfield to the Andrew Mellon Senior Research Fellowship at the Huntington Library, U.S.A., M.P. Barnes as a Corresponding Member of the Kungl. Gustav Adolfs Akademien, Uppsala, A.M. Garcia as a Member of the *Patronato Arcipreste de Hita,* for Medieval and Renaissance Studies, Professor E.W. Handley as an invited member of the *Comité scientifique* of the Foundation Harot in Geneva, and Professor E.G. Turner as a Corresponding Member of the *Fondation Egyptologique Reine Elisabeth* in Brussels.

Honorary degrees were conferred on Fellows and members of the College as follows: the LL.D. of the University of Warwick on Professor L.C.B. Gower, the D.Sc. of the University of Warwick on Sir Frank Hartley, the LL.D. of the University of Birmingham on Master I.H. Jacob, the D.Sc. of the Heriot-Watt University on Dr F.E. Jones, the D.Sc. of the University of Reading on Sir Peter Medawar, the D.Litt. of the University of Leeds on Professor W.N. Medlicott, the Fil.Dr. of the University of Uppsala and the Doctor *honoris causa* of the University of Paris on Professor Randolph Quirk, the Doctor *honoris causa* of the Vrije Universiteit Brussel on Professor P.N. Rowe, the D.Lit. of the University of Leeds on Professor E.G. Turner, and the D.Sc. of the Heriot-Watt University on Sir Frederick Warner. Honorary degrees conferred on former members of the College included the D.Tech. of the Council for National Academic Awards on Dr J.W. Black and the D.Lit. of the Queen's University of Belfast on Professor C.M. Robertson.

M.P. Barnes was awarded a prize by the Kungl. Gustav Adolfs Akademien, Uppsala, for his work on the Norwegian visionary ballad, *Draumkvaede*, Professor R.L.F. Boyd was nominated by the Royal Society as Bakerian Lecturer for 1978, Dr Jocelyn B. Burnell was awarded the 1978 J. Robert Oppenheimer Memorial Prize of the University of Miami for the first observation of pulsars and invited to give the lecture associated with the prize, Dr R.N. Strange was awarded an Anglo-Iranian Fellowship to study plant disease in Iran, and Dr A. Warren was awarded the Royal Geographical Society Back Award for 1978 for studies of desert pollution.

APPOINTMENTS

At the start of the session Sir Colin Crowe succeeded Sir Edward Playfair as Vice-Chairman of the College Committee, and Mr H.R. Oakley became a member of the Committee, on the nomination of the Old Students' Association, in succession to Mr P.W. Heath. In the course of the session, following the granting of the new Charter, Sir Derek Mitchell was appointed a co-opted member of the newly-established Council, and Mr D.D.A. Leslie became a member as the person appointed after consultation with the University Senate.

On 1 May 1978 Professor D.W. James was appointed Vice-Provost with special responsibility for medical affairs, in succession to Professor S.P. Datta who had held the office since 1973.

In the course of the session D. Bishop, formerly Under-Secretary, Department of Transport, came to the London Master Builders' Chair of Building, and, within the College, Professor J. Musgrove, Professor of Architecture by conferment of title, was appointed to the Haden-Pilkington Chair of Environmental Design and Engineering, and Professor M. Stone, Professor of Probability and Statistics by conferment of title, was appointed to the Chair of Statistics and to the Headship of the Department of Statistics and Computer Science. At the start of the session Professor T.H. Lambert, Professor of Mechanical Engineering by confer-

ment of title, took over the Headship of the Department of Mechanical Engineering from Professor R.E.D. Bishop. The University of London conferred the title of Professor of Experimental Phonetics on Dr A.J. Fourcin, of Professor of Mathematics on Dr L.M. Hocking, and of Professor of Structural Mechanics on Dr J.M.T. Thompson.

The following became Readers by conferment of title: Dr M.G.B. Duff (Physics), Dr G. Gabella (Cytology), Dr I.R. Johnston (Biochemistry), and Dr N.R. Saunders (Physiology).

The following Visiting Professors were appointed during the session: Dr E.G. M'Ewen, Vice-Chairman (Engineering) of Joseph Lucas, Ltd (Mechanical Engineering); Dr P. Lindegard Hjorth (Scandinavian Studies); Dr Hanna M. Segal, President of the British Psychoanalytical Society (Freud Memorial Visiting Professor of Psychoanalysis); and J. Stirling, Banister-Fletcher Lecturer (Environmental Studies).

In the Department of History of Art Mr D.B. Davies became Director of Studies. Other College appointments included those of C.G.H. Plant as Warden of Campbell Hall, in succession to Dr T.W. Jones, and D.C. Knight as Manager of the Computer Centre.

Professor H. Billett was appointed Acting Provost for the session 1978-79 following Lord Annan's election as Vice-Chancellor of the University of London. Professor E.H. Scamell was appointed a Vice-Provost from 1 September 1978.

There were a number of appointments on the College Administration following the retirement of the Secretary and the Deputy Secretary towards the end of the session, and the subsequent reorganisation of the structure of the Administration. These included the appointment of J.R. Tovell, previously Finance Secretary and Accountant, as Secretary of the College, D.V. Bowles, previously Deputy Accountant, as Finance Officer, Dr A.K. Huggins, previously Senior Lecturer in the Department of Biochemistry, as Senior Assistant Secretary (General), and C.C. Moore, previously Assistant Secretary (Development Planning) as Senior Assistant Secretary (Academic).

Changes in College Faculty appointments were as follows: Professor W.E. Butler and Professor T.H. Lambert became respectively Deans of the Faculties of Laws and Engineering; and Professor D.W.J. Johnson, Professor J.W. Mullin, Dr B.R. Jewell, and Professor J. Musgrove became respectively Vice-Deans of the Faculties of Arts, Engineering, Medical Sciences and Environmental Studies. R.J. Fisher was appointed Sub-Dean of the Faculty of Environmental Studies.

Professor J.P. Barron, formerly Reader in Numismatics at the College, was appointed to the office of Public Orator in the University of London in succession to Mr A. Tattersall.

During the year announcement was made of the following appointments of members and former members of the College to academic posts outside the College: Dr B.R. Jewell to a new Chair of Physiology in the University of Leeds, Professor I.M. Allison as Professor of Mechanical

Engineering and Head of Department, University of Surrey, Professor Sir Roy Marshall as Vice-Chancellor of the University of Hull, Dr P. Morton-Williams as Professor of Social Anthropology at the New University of Ulster, Dr J.R. Pole as Rhodes Professor of American History and Institutions in the University of Cambridge, Dr I. Simmons to the Chair of Geography at the University of Bristol, and Professor D. Thomas to the Chair of Geography at the University of Birmingham.

RETIREMENTS

Professor E.H.S. Burhop who retired in September 1978 came to the Mathematics Department of the College as Lecturer in 1945 from the University of Melbourne. He transferred to the Physics Department as an established Reader in 1950, and the title of Professor of Physics was conferred upon him in 1960. In atomic physics he is best known internationally for his work on inner shell ionization, especially the theory of the Auger Effect. In particle physics he has been associated with building up the nuclear emulsion group and its use of K^- mesons as probes of nuclear structure. He pioneered the development of hybrid techniques using nuclear emulsion together with other particle detection techniques to study the emission of short-lived 'charmed' particles from neutrino interactions. While on leave at CERN (1962-63) he served as the first secretary of the European Committee for Future Accelerators (ECFA) which formulated European policies in high energy physics for the following 15 years. He served on many committees, both College and University, and was College Dean of the Faculty of Science (1967-70). He was elected President of the AUT Local Association (1970-72). For most of his career Professor Burhop has been interested in problems of international scientific cooperation, of disarmament, and of the social relations of science. He was one of the founders of the Pugwash Movement and has been, since 1970, President of the World Federation of Scientific Workers. His honours include election to Fellowship of the Royal Society, 1963; Joliot-Curie Medal, 1966; Lenin International Peace Prize, 1972; election to Foreign Membership of the G.D.R. Academy of Sciences, 1974; Order of Cyril and Methodius (Bulgaria, 1974); Honorary Membership Eötvös Lorand Physical Society (Hungary, 1975); award of Honorary Degree of D.Univ. of the Open University, 1975.

Professor Sir Bernard Katz, Head of the Department of Biophysics since 1952, retired at the end of the session. He joined Professor A.V. Hill's laboratory in the Department of Physiology in 1935 and after war service with the Royal Australian Air Force returned in 1945, first as Henry Head Research Fellow of the Royal Society, and then in 1950 to the established Readership in Physiology. He made important measurements of the electrical properties of muscle fibres and (with A.L. Hodgkin) carried out the experiments on the giant nerve fibre of the squid which established the sodium theory of the generation of the action potential, before turning again to the problems of neuromuscular transmission which

have been his principal interest since 1949. He and his collaborators – notably Paul Fatt, Jose del Castillo and Ricardo Miledi – established almost all the known features of the release of acetylcholine and its action on the postsynaptic membrane. On AV's retirement in 1952, his Biophysics Research Unit within the Department of Physiology was established as a separate Biophysics Department, and Katz was appointed as its Head and to the established Chair of Biophysics. In this capacity, he not only continued his own work but carried on the tradition of AV by supervising and giving encouragement to visiting workers from all over the world. Election to the Royal Society came in 1952 and he was its Biological Secretary from 1968 to 1976. He was knighted in 1969 and in 1970 was awarded a share in the Nobel Prize for Physiology or Medicine for his discoveries to do with neuromuscular and synaptic transmission. Sir Bernard will keep a room in the Department and we all expect that during retirement he will remain as productive as ever.

The retirement of Professor D. Lewis from the Quain Chair of Botany deprives the College of an outstanding biologist. He graduated from the University of Reading in 1935 and joined the John Innes Horticultural Institution in the same year. Early work with the genetics of fruit trees led quickly to fundamental discoveries concerning the natural control of fertility in flowering plants. He became Head of the Department of Genetics at the Institution in 1948, and a Fellow of the Royal Society in 1955. He came to University College in 1957 as Head of the Department of Botany, the first geneticist to be appointed to the Quain Chair. As Dean (1964-67) he saw through the transition from Departmental to course-unit teaching in the Faculty of Science, a complex operation accomplished with remarkably little friction or rancour. Through his activities in the Royal Society and the U.G.C. (1969-74), Professor Lewis was able to exert a wide influence on the development of biology in Britain during a period in which the life sciences became transformed by new concepts, techniques and instrumentation. At University College the expansion of interests in his own Department, which he did much to stimulate, was marked by its being renamed in 1968 Botany and Microbiology. Despite his eventful professional life Professor Lewis did not allow his wider interests to languish, and colleagues throughout the College will miss his enthusiasms for Mozart, opera, and the fine arts generally.

Professor N. Lichfield retired from the Chair of Economics of Environmental Planning at the end of the session, after twenty-three years' association with the College. Since his appointment to the Ministry of Town and Country Planning in 1945 he has established an international reputation through practice and, especially, research in the economics of planning and urban development. A sabbatical year in 1960 studying United States planning and urban economics proved a turning point. Two years later he left the Civil Service to set up a consultancy practice, while continuing his research on cost benefit analysis and his part-time teaching which had first brought him into association with the College. By the

time of appointment to the Chair in University College in 1966 he had two books to his credit, and had been the author of planning reports for government departments and local authorities in Great Britain, the Irish Republic, New Zealand and Singapore. He was President of the Royal Town Planning Institute in 1966-67 and made an important contribution to the development of its policies on planning education. During tenure of his Chair, Professor Lichfield has undertaken assignments for governments and local authorities in York, Jerusalem, and for the development of new towns in Israel. His strong academic connections with the Hebrew University have resulted in his setting up an International Centre for Land Policy with colleagues there. Despite the pressures of this work his knowledgeable and friendly presence in College has generated an interest in his subject amongst colleagues and students in the Bartlett School of Architecture and Planning which will ensure its continuity in the future. The College is delighted that he has accepted appointment as a Visiting Professor on his retirement.

'We welcome our new Reader in Papyrology; and we hope that as well as reading he will soon be writing too'. That was how the College Classical Society acclaimed the arrival of Eric Turner from Aberdeen in 1948 — a quiet, even withdrawn-looking man with alert eyes, mobile hands, and an infinite capacity for surprises, whose title of Professor was conferred two years later. He transcribed and edited for the first time an impressive quota of the most demanding Greek literary texts and documents, among them papyri of Menander's *Misoumenos* ('The man she hated') which were published in 1965 and 1978 and restored large parts of this famous lost play to knowledge. He was the architect of the whole collaborative enterprise between the College, the Egypt Exploration Society, Oxford University and the British Academy from which has issued a string of distinguished volumes of new texts edited by him and his partners. His trilogy devoted to books and writing in the ancient Greek world began with *Greek Papyri* in 1968. Besides, he earned golden reputation as a tutor. Among honours and offices have been election to Fellowship of the British Academy (1956) and to foreign Academies; doctorates from Brussels, Geneva and Liverpool; the C.B.E., awarded in 1975; the Presidency of the Hellenic Society and of the Union Academique Internationale; the Directorship, for its first ten years, of the University's Institute of Classical Studies. We trust that as a distinguished honorary member of the College he will still often be seen whenever he can be tempted from his fastness in Scotland or his excursions abroad.

Inconspicuously, in 1945, Margaret Cunningham joined the Departments of Greek and Latin; thirty-three years later she retired from her Lectureship to become an Honorary Research Fellow, the occasion marked by a party on the portico steps with hock, strawberries and friends from all quarters. In the interval occurred a generation of development of classical studies in London, with events of which, like Aeneas, she was a great part; but (unlike Aeneas) she would be the last to say so. She rarely

published herself, but contributed effectively to the work of others from her expertise in Greek drama and Greek metre; and in recent years she has done much to prepare for publication a work on metre by her former teacher A.M. Dale (the late Professor A.M. Dale), of which the first volume has appeared and the rest are awaited. She will be remembered above all, with her impeccable academic background and her warm devotion to the able and the less able alike, as a teacher – keen, idiosyncratic, kind and demanding by turns; in that, there is a lot to replace.

Dr F.C. Webb retired as Senior Lecturer in Biochemical Engineering after 20 years at UCL. He was appointed originally to the newly-created Guinness Lectureship in Biochemical Engineering in 1958 after 25 years of varied experience in industry. Originally a graduate in chemistry from the Royal College of Science (Imperial College) where he also obtained a Ph.D. for work on fish oils, he began employment with Thos. Hedley and Company Limited where he had experience of both research and development and manufacture of a variety of products. During the war he joined the Ministry of Food where he became an expert both on refrigeration and the preservation of food by drying. He subsequently became a factory manager for Thos. Wall and Sons Limited, controlling a staff of 1,300 producing ice-cream meat products and then a production manager with a company making cosmetics and pharmaceuticals. This rich experience formed the basis for the postgraduate course he devised in biochemical engineering and his textbook on the subject, one of the first, was published in 1963. He has since advised in many countries of the world and helped to found the now well-established department at the University of Western Ontario.

Miss H. Jean M. Edmiston joined the Department of Statistics in May 1946, acting as part-time librarian in the library shared by the Departments of Statistics and Eugenics, Biometry and Genetics (later renamed the Department of Human Genetics and Biometry). She won the affection of everyone in both departments by her quiet efficiency and helpfulness. When Human Genetics moved into Wolfson House its publication, *The Annals of Human Genetics,* needed an assistant editor. Jean Edmiston took over this job as if she had been editing all her life, coping not only with the manuscripts and proofs but also with referees and publishers. She also unofficially supervised the departmental library, experimented on the effect of magnetic fields on plant growth, and wrote detective stories under pen-names.

Arthur Tattersall retired as Secretary of the College in August 1978 taking with him the good wishes and heartfelt thanks of his colleagues and friends in UCL. When he joined us in 1964 his own scholarship and his long experience of academic administration, both in the University of London and overseas, quickly became apparent when he slipped smoothly into the work and company of our community of scholars. Indeed, under him the administration has become an organic and vital part of the academic community and the division so apparent in some

other universities has disappeared here. Almost every member of staff can recall personal kindness from 'Tat' and every head of department can remember good advice. He would be the first to acknowledge the strength of the team which he led, and we all have reason to be grateful for that, but in university administration the team-work depends so much on the style of its captain and Tat has been a captain with style. Tat is a man of many parts. Both College and University have gained from his lively interest in the world of ideas, a deep knowledge of literature and the arts and a pervading concern for the quality of life. Who enjoying his *bravura* performances as Public Orator at Honorary degree ceremonies in Senate House could doubt his love of the English language? To follow Joel Hurstfield in this role would have daunted a lesser man; but, if he was nervous, it never showed and Chancellor, audience and victims revelled in the subtlety and wit. Nor will we forget his contribution to our social life, ably partnered by Gisela on so many occasions. His retirement has come about during an era when UCL has grown in standing in the world of scholarship. The support of his superb, human administration has stimulated that growth and when the sturdy plant was tested in the unkind winds of recent economies it swayed but did not break or wither. Tat's loyalty to the College and his sincerity have been inestimable strengths. We hold him in affection and respect.

L.J. Gue retired as Deputy Secretary at the end of July, after almost half a century in the College's service. He is just about the last of those whose pre-1930 file papers were destroyed in the Blitz; his file begins with a note from C.O.G. Douie (21.1.1931) increasing his salary from £1.7.6 to £1.12.6 per week! Mr Gue worked in Accounts for 14 years and then became Publications Assistant. He became Records and Publications Officer in 1960, Assistant Secretary (Academic Administration) in 1968, Senior Assistant Secretary in 1975, and Deputy Secretary in 1976. This bare outline, impressive though it is in its continuity and in the loyalty to the College which it implies, does nothing to convey the value of Mr Gue's services or the esteem in which he is held by his colleagues; but each successive post which he has held in the College has made its own contribution to his unique pattern of service. His accuracy in detail, his phenomenal knowledge of the College's history, his drafting ability and punctilious exactness of expression, his understanding of procedure, all have their roots in his experience here, as well as in his genes. To these one must add his instant, infinite helpfulnesss to all, his bonhomie, his sense of social responsibility, his integrity and his unfailing sense of duty. During the War he served in the London Fire Service, through the worst of the Blitz, and saw the College from close quarters at its lowest ebb after the bombing of 1940 and 1941. No one has taken more pride in its recovery and no administrator has contributed more to it. We hope that in his retirement he will record his store of recollections of the College, its staff and its students. We shall miss him sadly.

C.R. Fincken retired on 31 July 1978. He joined the staff as an Assistant

Librarian in September 1937 and, apart from his years of war service, had been with the Library since then and has been in charge of the Mocatta Library since its rededication in 1954. Throughout his long service he has also given invaluable help in many other sections of the Library, particularly with the Egyptology, English and Hebrew collections, and in the detailed cataloguing of the rare books in the Graves library of the history of science. His generous gifts to the Library of modern English poetry leave us with a tangible memory of his years of service.

RESIGNATIONS

In September 1977 the College Committee lost the services of two Inner London Education Authority representatives: Mrs Irene Chaplin who had been a member since 1949 and Mr B.C.G. Whitaker, a member since 1971. We should like to thank them both very much for all they have done to further the interests of the College.

Dr J.W. Black resigned as Professor and Head of the Department of Pharmacology to take up the post of Director of Therapeutic Research at the Wellcome Research Laboratories. He came to the Department in 1973 after spending 15 years in industry, firstly with Imperial Chemical Industries where he was responsible for the introduction of beta-adrenoceptor blocking drugs (β-blockers, such as propranolol), and then with Smith, Kline and French where he repeated his therapeutic success with the production of a new class of histamine antagonists specially designed to reduce acid secretion in the stomach (histamine H_2-receptor blockers, such as cimetidine). Jim Black's period at UCL was brief but significant. In collaboration with the Department of Chemistry he instituted a course in Medicinal Chemistry aimed at producing chemists who could work with pharmacologists in designing new drugs. He was concerned that the teaching of pharmacology as a scientific basis for drug therapy had lagged behind the rapid growth of this subject in recent years so that doctors are receiving inadequate training to enable them to handle new knowledge and new drugs. Collaboration with Clinical Pharmacology was another interest which he successfully pursued. In a period of financial contraction in the universities Jim Black felt unacceptably constricted by the economies he had to make. Reluctantly he decided to return to industry whilst maintaining close contacts with the Department where he has accepted an Honorary Lectureship.

Professsor Mary Douglas has resigned from the Department of Anthropology in order to take up a research post with the Russell Sage Foundation in New York. After carrying out field research in Central Africa (in the then Belgian Congo among the Lele) she came as a lecturer in anthropology to University College in 1951. In 1963 the title of Reader in Social Anthropology was conferred upon her and in 1970 the importance of her research and writing to British anthropology was recognised by conferment of the title of Professor of Social Anthropology. Her analyses of cultural systems and their relationship to economic and political structures, and the unfailingly provocative and stimulating nature of her work have

been a major contribution to the contemporary development of anthropology and to the intellectual life of the University. Her work in New York will centre on the further elaboration of her research on social and symbolic forms. Her association with the College will not be broken as she has been made an Honorary Research Fellow of the Department.

Professor G.P. Goold, in the words of one of his favourite ancient authors, had journeyed among many peoples and across many seas between his graduation and doctorate in University College and his return twenty odd years later in July 1973 as the fourteenth holder of a Chair of Latin which goes back to the very beginning of teaching in the College in 1828. He reappeared by way of Hull, Cape Town, Winnipeg and Harvard; he continues in orbit to Yale. One lasting interest which both began and has been fulfilled here is the making of a new edition of the *Astronomica* of Manilius, together with the first English translation of the whole work to be published since 1697. But Professor Goold will above all be remembered as a man who wished devotedly to inspire his students and associates with scholarly ambitions equal to his own. This showed, and he was proud that it showed, whether he was teaching Latin beginners in College in his thrice-weekly classes at 9 a.m. or arguing his way through a seminar on Catullus at the Institute of Classical Studies. It is a good thought that if his friends do not bring him back to London from time to time, Covent Garden will.

Professor E.G. Gray resigned his position as Professor of Anatomy (Cytology) at the end of 1977 to take up an appointment as Head of the Department of Ultrastructure at the National Institute for Medical Research at Mill Hill. He was a member of staff at UCL for twenty-two years, during which time he followed a distinguished career in studies of the nervous system using the electron microscope. Amongst his major achievements was the classification of two types of synaptic structures in the cerebral cortex. By applying strict criteria to the classification of profiles as axonal, dendritic or glial, he brought order into a chaotic subject. With his recent elegant demonstration of the presence of microtubules in synaptic endings and their role in the transport of vesicles, he made yet another major contribution to knowledge of central nervous system function. In 1976 his outstanding work was recognised by election to the Royal Society. His influence on the Department will long be remembered and will continue in his capacity as Honorary Research Fellow.

OBITUARY

We record with regret the death during the year of a number of members and former members of the College. They included four Fellows.

We were much saddened, shortly before the end of the Summer Term, to learn of the death of Lord Strang, at the age of 84. Lord Strang had a distinguished career in the Foreign Service, notably as our Ambassador in Moscow and as Permanent Under-Secretary of State at the Foreign Office; but we think of him most warmly as a faithful member of the College,

whose associations with UCL spanned the whole of his career. He was a student here under Ker, graduating in 1912, and came back to us as a member (1955), subsequently becoming Chairman (1963), of the College Committee, having been elected a Fellow in 1946. His devotion to the College was a pleasure to see. He visited every department, and knew many of the staff as friends, showing a real interest and pride in their work. He also made it his business to know successive generations of Union officers, as well as other students in less exalted positions. He exercised his control over our affairs with a light and sensitive touch and a mixture of shrewdness and humanity, aiming always at the maintenance of the highest academic standards and the best possible human relations. Lord Strang was the ideal partner for Lord Evans, and the College owes much to their joint efforts. Lady Strang too, in her gentle way, gave much to our social life, and her death in 1974 was a severe blow to him. We shall remember Lord Strang as one of our most able and most loyal graduates, who believed that he owed everything to this College, but who repaid any such debt a thousandfold.

The College mourns the death of Leonard Ashley Willoughby (1885-1977), Emeritus Professor of German and Senior Fellow, who took his first degree at University College in 1906 and returned from 1931 to 1950 as successor to his old teacher Priebsch.

To remember his life is to review the course of much of modern Germanistik in this country. He began as a Medievalist, later developing the study of relations between English and German literature. In mid-career he contributed to undergraduate needs with his many editions of German texts, and his two introductions to Classical and Romantic German literature. He sustained the English Goethe Society as Secretary and President across three decades. He is best remembered for his later studies of Goethe and his age in association with his student and colleague Professor Elizabeth M. Wilkinson.

To hold a Chair of German in the 1930s, to renew confidence in German culture and to rebuild scholarly contacts with Germany in the 1940s demanded much in the way of faith in one's subject, and of diplomacy and organising powers. This is the perspective from which to view his founding of *German Life and Letters* in 1937, his unstinting help to refugee scholars and his will to establish the University Institute to Germanic Studies after the war. He was President of the Modern Humanities Research Association and of the Modern Language Association of Great Britain, Freeman of the City of London, and Honorary Member of the Viennese Goethe Society and of the Modern Language Association of America. He was one of five recipients of the Goethe medal struck in 1949 by the City of Frankfurt and he held the gold medal of the Munich Goethe-Institute 'for service to the care of the German language abroad'. That could serve as epitaph. But he might himself have preferred Goethe's injunction: *'Gedenke zu leben!'*

Other Fellows who died during the year were Sir Thomas Cash, formerly

Deputy Under-Secretary of State for War, and Sir Stewart Duke-Elder, formerly Extra Surgeon Oculist of Her Majesty the Queen and sometime Director of Research, Institute of Ophthalmology, University of London.

Three members of the academic staff died during the year: Mr R.H. Elvery who had been a key member of staff in the Department of Civil and Municipal Engineering for 28 years, died on 1 July 1978. He joined the College as a Lecturer in 1950, having previously worked at the Road Research Laboratory, the Northern Polytechnic and at the Cement and Concrete Association as the first editor of the Magazine of Concrete Research. In 1963 he was promoted to Senior Lecturer and in 1971 the title of Reader in Concrete Technology was conferred upon him. Bob Elvery's special interests were in concrete technology and structural design; he was a pioneer in the application of non-destructive testing methods to concrete and timber. Through his research studies over more than 20 years he became recognised as a world authority in the field and played a dominant role in establishing the value of these methods in the construction industry. With his colleague, Dennis Vale, he developed a portable instrument (PUNDIT) for measuring the ultrasonic pulse velocity in materials which was manufactured commercially and achieved world wide sales. He was an exceptionally able teacher, deeply respected and, indeed, loved by his students for his enthusiasm for his subject and the warmth and generosity of his personality. To his colleagues he was the kindest of friends with a great sense of fun and an appropriate humorous story for all occasions. Bob Elvery was devoted to the College and despite his busy life was always willing to take on additional administrative work both within and outside College. He was a keen supporter of the Old Students' Association and had recently taken over Chairmanship of the Technical Staffs Committee. The loss to the Department and the College will be felt for a very long time.

Dr A.M. Soutter came to the College as a Research Assistant in the Department of Biochemistry in October 1972 and worked there until his most unexpected and untimely death on 15 January 1978 at the age of 31. During this period he worked with Dr A.K. Huggins on a series of investigations concerned with the effects of changes in environmental salt concentration on the metabolism of various aquatic species. He will be greatly missed by all those who knew him since besides his contribution to the scientific work of the Department, he took a keen interest in its general affairs. A firm supporter of informal staff-student contact he was particularly prominent in organising staff-student functions. This latter aspect of his personal role has been recognised by the recent award of the first Memorial Award bearing his name to Mr H.A. White for the most outstanding contribution to staff-student relations in 1977-78.

Keith Vaughan was born at Selsey Bill, Sussex, on 23 August 1912 and was educated at Christ's Hospital. In his twenties he designed book jackets and did illustrations for advertising. In the war he was a conscientious objector and served in the Pioneer Corps; during this period he managed to

paint and held his first exhibition at the Lefevre Gallery in 1942 followed, in 1946, by a larger exhibition. Associated with the English Romantics (Graham Sutherland, John Minton, Michael Ayrton etc.) his work was, in the main, based upon two major themes, the male nude and the English landscape tradition. These sustained him throughout the whole of his creative life enabling him 'to suggest an echo of the humanist tradition without making reference to any historical or mythological theme' and provided the intuitive basis for the poetic individualism that was the specifically English characteristic of his talent. He became a Visiting Lecturer at the Slade in 1954 and latterly, with Professor William Townsend, worked with postgraduate students. His outstanding gifts as a teacher found their most rewarding and sympathetic realisation in the 'one-to-one' tutorial basis that the Slade School provides. A much travelled artist, he was 'Artist in Residence' at Iowa State University in 1959. In 1962 the Whitechapel Art Gallery was host to a full-scale retrospective exhibition and in 1965 he was made a C.B.E. In addition to working as an illustrator for various publishers, he wrote and illustrated his own Diaries in 1966. He died on 4 November 1977 after a long illness.

Emeritus Professor Herbert Dingle, Head of the Department of History and Philosophy of Science from 1946 to 1955, died on 4 September 1978, aged 88. He came from Imperial College, were he was Professor of Natural Philosophy from 1937. There he made important contributions to spectroscopy and astrophysics, but became increasingly interested in the philosophy of science, expounding in many publications his view that science must be a rational scheme of thought based on experience. He rejected the mysticism present in the scientific philosophies of Eddington and others, but was careful to point out that science could never provide solutions to some ethnical and other problems. The work of the Department of History and Philosophy of Science was suspended during World War II and Dingle presided over its revival and expansion when it was still unique in Britain. He had entered Imperial College as a student in 1915 with a scholarship gained after years of evening study while employed as a clerk, and this made him sympathetic to the part-time students who formed the majority of the postgraduates in the department: several now occupy Chairs in other universities. Dingle had the distinction of being elected president of three learned societies – the Royal Astronomical Society, the British Society for the History of Science and the British Society for the Philosophy of Science. A lover of poetry, he wrote literary as well as scientific criticism and these two interests are exemplified by the titles of his last books – *Science at the Crossroads* (1972) and *The Mind of Emily Brontë* (1974).

Maxwell Bruce Donald, Emeritus Professor of Chemical Engineering in the University of London, died on 6 January 1978 aged eighty. He was appointed Lecturer in Chemical Engineering atUniversity College London in 1931, Reader in 1946 and Ramsay Memorial Professor in 1951. He retired in 1964. After the destruction of the Ramsay Memorial Laboratories at the College in 1941, Professor Donald completed the chemical engineering

courses under difficult conditions and then became closely involved with the development of the limpet mine and fuses. In 1946 he reopened the Department at University College, where his promotion of interdisciplinary studies and the development of biochemical engineering as an academic discipline owe a great deal to his encouragement of the subject. One of his hobbies, historical research into the metallurgical industries, coupled with his attachment to Cornwall, developed into a major activity in his later years and resulted in the publication of two books on the development of the copper industry in the sixteenth century: *Elizabethan Copper* (1955) and *Elizabethan Monopolies* (1961). Professor Donald was Honorary Secretary of the Institution of Chemical Engineers from 1937 to 1956 and played a major role in keeping it alive during the war years. He was awarded the Moulton medal in 1937, the Osborne Reynolds medal in 1940 and in 1961 he had the rare distinction of being elected to Honorary Life Membership of the Institution. He was chairman or member of many national and professional committees. He was a man of many parts, took a keen personal interest in all his students and was regarded with great affection throughout the profession of chemical engineering.

Other former members of the academic staff who died were Dr A.M. Ballantyne, formerly Secretary of the Royal Aeronautical Society, a member of the staff of the Department of Civil and Municipal Engineering from 1936 to 1951, Emeritus Professor L.F. Bates, Emeritus Professor of Physics, Nottingham University, since 1964, and a former member of the staff of the Department of Physics from 1924 to 1930 and Reader in Physics from 1930 to 1936, Martin Shaw Briggs, who had held a part-time lectureship in the Bartlett School of Architecture from 1919 to 1923 and had returned to give courses of lectures from 1946 to 1957, Professor T.J.B. Spencer, Professor of English Language and Literature in the University of Birmingham and Director of the Shakespeare Institute, a member of the staff of the Department of English Language and Literature from 1946 to 1955, and Dr Helen Spurway (Mrs J.B.S. Haldane), who held appointments in the Departments of Eugenics, Biometry and Genetics (in which she had previously been a student) from 1942 to 1957.

Four honorary members of the academic staff died during the year. These were: Professor W. Landauer (Human Genetics and Biometry), Dr W.G. Moore (French Language and Literature), a member of the staff of the Department from 1948 to 1950, Dr I. Shachar (Hebrew and Jewish Studies), and Professor G. Turville-Petre (Scandinavian Studies), who had been for many years a member of the Committee for the Promotion of Scandinavian Studies.

Dr A.S. Diamond who had served on the Mocatta Library Committee since 1963 as one of the eight representatives of the Jewish Historical Society, died on 1 March 1978.

Among former students who died in the course of the year were A.L. Abel, Consulting Surgeon to a number of London hospitals; Duncan Grant, the artist; Dr H.L. Oswal, Professor of Surveying at the University of

Papua, New Guinea; G.R. Reitlinger, writer on contemporary history and on the history of art; and A. Sisson, architect.

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BY MEMBERS OF COLLEGE DEPARTMENTS

1 AUGUST 1977—31 JULY 1978

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APPENDIX I

NUMBERS OF STUDENTS, 1977-78

	Under-graduate	*Post-graduate*	*Totals*
Faculty of Arts	1,346 (241)	394 (133)	1,740 (374)
Department of Political Economy	246 (3)	30 (1)	276 (4)
Slade School of Fine Art	105 (2)	113 (6)	218 (8)
	1,697 (246)	537 (140)	2,234 (386)
Faculty of Science	1,234 (2)	*591 (138)	1,825 (140)
Faculty of Medical Sciences	308 (0)	1 (1)	309 (1)
Faculty of Engineering	413 (1)	228 (42)	641 (43)
Faculty of Laws	296 (12)	†170 (47)	466 (59)
Faculty of Environmental Studies ..	197 (2)	241 (44)	438 (46)
	4,145 (263)	‡1,768 (412)	5,913 (675)

The figures in brackets indicate the number of part-time students included in the total under each head.

* This figure includes 79 full-time and 28 part-time students working in the College Faculty of Medical Sciences who were registered in the University Faculty of Science.

† This figure includes 11 full-time students studying for an M.Sc. in International Relations who were registered in the University Faculty of Economics.

‡ Of this number 1005 full-time students and 326 part-time students were registered for higher degrees of the University of London; the remainder were either working for higher diplomas of the University or of the College, higher degrees of other Universities, engaged in research work, or attending postgraduate lecture courses.

APPENDIX II

UNIVERSITY FIRST DEGREE AND DIPLOMA AWARDS

1 OCTOBER 1977 – 30 SEPTEMBER 1978

FACULTY OF ARTS

B.A. Degree	*1st Class Honours*	*2nd Class Honours Upper Div.*	*2nd Class Honours Lower Div.*	*3rd Class Honours*	*Pass*	*Total*
Classics	1	3	4	–	–	8
Classics and Ancient History	–	–	1	–	–	1
English	1	17	21	11	–	50
Fine Art	–	1	–	–	–	1
French	4	13	15	–	–	32
Geography	3	17	26	2	1	49
German	5	1	5*	–	–	11
History	2	17	9	1	–	29
History of Art	–	8	4	–	1	13
Italian	–	–	2	1	–	3
Latin	–	–	1	–	–	1
Medieval Archaeology	–	–	4	–	–	4
Modern Iberian and Latin American Regional Studies	–	3	5	1	–	9
Philosophy	4	11	5	–	1	21
Scandinavian Studies	–	1	4	–	1	6
Ancient History and Social Anthropology	–	2	1	–	–	3
Anthropology and Linguistics	–	2	1	–	–	3
English and History of Art	–	1	1	1	–	3
English and Linguistics	–	–	–	1	–	1
French and History of Art	–	1	1	–	–	2
French and Linguistics	–	1	–	–	1	2
German and Danish	–	1	–	–	–	1
German and History of Art	–	4	–	–	–	4
German and Linguistics	1	–	1	–	–	2
German and Norwegian	–	1	–	–	–	1
German and Swedish	–	1	1	–	–	2
History and History of Art	–	3	1	–	–	4
Italian and History of Art	–	–	2	–	–	2
Philosophy and Economics	–	2	1	2	–	5
Philosophy and History of Art	–	1	2	–	–	3
	21	112	118	20	5	276

University Diploma in Fine Art: 14 students passed

*Includes 1 Student credited with Degree in 1969, subject to passing Subsidiary subject.

FACULTY OF LAWS

LL.B. Degree	*1st Class Honours*	*2nd Class Honours Upper Div.*	*2nd Class Honours Lower Div.*	*3rd Class Honours*	*Pass*	*Total*
	1	26	47*	12	3	89

*includes 1 Suspense Year student

FACULTY OF MEDICINE

Basic Medical Sciences and Pharmacology Examination: 121 Students passed.Second Examination for Dental Degrees: 49 Students passed

FACULTY OF SCIENCE

B.Sc.Degree	*1st Class Honours*	*2nd Class Honours Upper Div.*	*Lower Div.*	*3rd Class Honours*	*Pass*	*Total*
Anthropology	4	7	13	6	1	31
Applied Physics	2	2	2	2	2	10
Architecture	7	11	23	10	–	51
Astronomy	4	3	13	6	–	26
Astronomy and Physics	1	2	4	3	–	10
Biochemistry	3	5	5	2	–	15
Biology	–	1	–	–	–	1
Botany	–	5	3	–	–	8
Chemistry	2	4	4	3	1	14
Chemistry and Physics	1	2	–	–	–	3
Combined Science	–	–	–	1	1	2
Computer Science	–	–	2	3	1	6
Genetics and Microbiology	–	–	2	1	–	3
Genetics and Zoology	1	–	1	–	–	2
Geography	2	12	12	1	–	27
Geology	–	2	5	1	1	9
Human Sciences	1	5	1	1	–	8
Mathematics	2	7	14	3	2	28
Medicinal Chemistry	1	1	2	2	–	6
Microbiology	–	5	7	4	–	16
Pharmacology	1	4	2	–	–	7
Physics	4	3	5	4	–	16
Physiology	1	6	3	–	–	10
Psychology	5	20	25	1	1	52
Statistics	–	1	2	–	–	3
Statistics and Computer Science	–	2	1	1	–	4
Zoology	–	6	14	4	1	25
	42	116	165	59	11	393

B.Sc. (Intercalated) Degree	*1st Class Honours*	*2nd Class Honours Upper Div.*	*Lower Div.*	*3rd Class Honours*	*Pass*	*Total*
Basic Medical Sciences						
and Anatomy	2	5	1	–	–	8
and Biochemistry	–	2	3	–	–	5
with Computer Science	1	1	–	–	–	2
with History of Medicine	1	3	2	–	–	6
with Human Biology	–	1	3	–	–	4
with Human Genetics	1	2	–	–	–	3
and Pharmacology	–	6	2	–	–	8
with Pharmacology	–	1	–	–	–	1
and Physiology	2	3	–	–	–	5
with Physiology	–	2	–	–	–	2
with Psychology	1	6	1	–	–	8
with Immunology	–	6	2	–	–	8
Biomedical Sciences	–	1	–	–	–	1
	8	39	14	–	–	61

FACULTY OF ENGINEERING

B.Sc. (Engineering) Degree	*1st Class Honours*	*2nd Class Honours*		*3rd Class Honours*	*Pass*	*Total*
		Upper Div.	*Lower Div.*			
Biochemical Engineering	–	2	2	1	1	6
Chemical Engineering	3	6	10	2	1	22
Civil Engineering	6	10	10	12	3	41
Electronic and Electrical Engineering	3	2	6	6	2	19
Electronic Engineering with Computer Science	1	1	3	2	4	11
Mechanical Engineering	2	4	2	4	1	13
Naval Architecture	4	3	2	1	1	11
	19	28	35	28	13	123

FACULTY OF ECONOMICS

B.Sc. (Economics) Degree	*1st Class Honours*	*2nd Class Honours*		*3rd Class Honours*	*Pass*	*Total*
		Upper Div.	*Lower Div.*			
Economics	3	15	18	5	3	44
Economics and Economic History	–	2	2	1	1	6
Economics and Geography	1	5	7	1	–	14
Economics and Social Anthropology	–	1	2	–	–	3
Economics and Statistics	–	2	4	1	1	8
	4	25	33	8	5	75

APPENDIX III

UNIVERSITY HIGHER DEGREE AND HIGHER DIPLOMA AWARDS

1 OCTOBER 1977 – 30 SEPTEMBER 1978

FACULTY OF ARTS

Ph.D. *Bartlett School of Architecture and Planning:* Paul D. Pearson, Godfrey S. Rubens, Valerie G. Wigfall. *English Language and Literature:* Deborah A. Cherry, Karen E. Green, Patricia J.A. Stubbs. *Slade School of Fine Art:* Roy P. Armes. *French Language and Literature:* David J. Hartley, Peter D. Tame. *Geography:* Peter J. Jarvis, Mary Mason. *German:* Steven G. Moody. *Hebrew and Jewish Studies:* Risa Domb, Sydney B. Leperer, Abraham Levy. *History:* Andrew Barnard, Mary E.J. Chadwick, Jacqueline M. Fear, Alan F. Hooper, Patricia Kelvin, Philip R.R. Mansel, Philip D. Morgan, Roger A. Morriss, Deborah A. Wormell. *Italian:*φ *School of Library, Archive and Information Studies:* Irfan Cakin, José-Marie Griffiths, Hishmat M.A. Kasem. *Philosophy:* John C. Forge. *Phonetics and Linguistics:* John A. Holm, Christopher G. Lyons. *Scandinavian Studies:* John F. McGrail, Eysteinn Sigurdsson. (32)

φ Sullivan Kaufman awarded Ph.D. in Art of University of Essex.

M.Phil. *Bartlett School of Architecture and Planning (Town Planning):* Md. N. Alam, Richard H. Alty, Colin J. Arnott, Peter G.H. Ashe, Susan Baigent, Richard R. Bate, Julie A. Blythe, Denis J. Clarke, Jane M. Davies, Elizabeth A. Dufton, Tim N. Ewbank, David A. Lovatt, John W. McBride, Elena Papazois-Spachis, Barbara J. Perry, Mary E. Powell, Harvey M. Sanders, John C. Tatam, Angela M. Walker. *English Language and Literature:* Nancy H. Kohner. *French Language and Literature:* Paul S. Barrows. *History:* Norman Pilling. *History of Art:* Fani-Maria Tsigakou. *School of Library Archive and Information Studies:* Wishyar K. Muhammed, Isabella A. Shaw. *Philosophy:* Anita Avramides, Graham A. Curtis, Antonia Phillips. *Spanish and Latin American Studies:* Helen M.R. Borbolla. (29)

M.A. *Architecture:* Anthony Mason, John D. Murray. *Area Studies:* Michael H. Barker, Francisco A. Biato, Kathryn A. Castle, Vijay V. Chandy, Luiz A. De Castro Neves, Maria M. Dick, Mauricio Galinkin, Paul J. Goodrick, Maria E. Hurtado Merino, Stephen A. Marshall, Robert A. Mitchell, Jane S. Morris, Alison S. Packer, Jocey T. Quinn, Monika H.M. Reinfelder, *Jane V. Sabin, Alberto Schmidt, Fany D. Schwarzstein, Alvis J. Seymour, Catherine P. Silk, Michael R. Stevenson, Diana A. Tussie, Edith Wertheimer, Robert M. Williams. *English:* Sigbjourn L. Berge, James B. Brown, Daniel I. Egbe, Janet L. Pickles, Gwyneth T. Roberts. *German:* Rosa G. Klarner, Anna Lee, Anthony J. McDonagh, Adelheid B. Matthaus. *History of Art:* Valerie D. Darvill, Raymonde M. Martin, Trevor Wardle. *Library and Information Studies:* Christopher M. Baggs, Alain Besson, * Susan Bury, Juliet R. Congreve, Rui M.P.B. Costa, Claire E. Drinkwater, Haigoush Ebrahimi, Felix C. Ekpe, Rhonwen Gawith, Gary E. Gorman, Hilary M.B. Gresty, Stephen T. Harling, Marian Hesketh, Eileen G. Hutchens, Exekiel M.O. John, Jac-

queline A. Leal, Linda J. Parr, Mary J.G. Patrick, Rosemary V. Publicover, Helen Raseroka, Sheila Reid, *Mary E.S. Roebuck, Rosamund M. Slythe, Susana Soto, Hilda Stoddard, Theresa L. Thom, *Pnina Wentz, Rita M.H. White, Koo-Ho Yoon, Tarcisio Zandonade. *Linguistics:* Peter S.B. Brennan, Jan A. Holmberg, *Roger J. Kibble, *Margaret C.A. Koppel, Cynthia L. Richards, Motoko Tsuchiya. *Phonetics:* Sonia Arreaza, Abdoulaye Barry, Hasnee El-Hachemi, Brita E. Haycraft, Brigitte H.C. Hurrell, Joan Julia Mune, *Lisbeth M. Strojer. (81)

University Postgraduate Diplomas: Archive Studies 15 ‡; Fine Art 49; Linguistics 8 †; Town Planning 2.

* Awarded Mark of Distinction. ‡ 2 Candidates awarded Marks of Distinction.
† 3 Candidates awarded Marks of Distinction.

FACULTY OF ECONOMICS

Ph.D. *Laws:* Labib W. Kamhawi (1)

M.Sc. *Economics:* Christopher W. Bolt, *David J. Bostock, Raymond J. Churnside, Eleanor M. Coates, *Carole A.B. Cox, Philip Modiano, *Alison M. Munro, *Malcolm Pemberton, Wadih E. Slim, *Christopher Speedy. *International Relations:* Shahnaz Adamjee, Joe T. Aidoo, Anthony A. Amakiri, Clive A. C. Aston, Saviour A. Boluda Vila, *Sally C. Chadd, Alejandro San Martin, Vani Shanmugaratnam, Robert A. Woffenden, Afsheen Zubair. *Planning Studies:* Helen Yombre. (21)

* Awarded Mark of Distinction

FACULTY OF LAWS

M.Phil. Maurice A.H. Cottle. (1)

LL.M. Michael A. Abramson, Michael R. Battle, Maria E.K.F. Bellamy, Allan Blake, Maximo L. Bomchil, Jacqueline L. Brown, James B. Carter, Nicholas A.P. Cheshire, Christakis P. Clerides, Richard Collett, John A. Connors, Richard Coutu, Eugenia Eliadou, Michael A. Alkaim, Evros J. Evripidou, Stephen H. Foster, Aliriza Gorgun, Steven A. Hale, Lambros Karadimos, Constantine Kontos, Michael D. Kretzmer, Lai Siu Chiu, Robert E. Leek, Basil S. Louvaris, Douglas J. McGill, Alexandra Mandaraka, Anna Markodimitraki, Arula N. Moodliar, Brian K.M. Mparadzi, Steven D. Muni, Syed M.S. Nasser, Patrick W.G. Nyamali, Bharat Patel, Judith M. Powell, Anthony J. Pyne, Heather M. Rayner, Leo P. Reilly, Laurence P. Ross, Peter J. Rowe, Maria K. Rudzinska-Tattersall, Jennifer A. Scovell, Donna Seruya, Ronald G. Sinclair, Mary M. Slatter, Georgios Spiliopoulos, Lindsey E. Squire, John D. Stringer, Ter Kim Cheu, Iona A. Tremlett, Herbert H.K. Tsoi, Geoffrey E. Underwood, Margaret E. Wilkie, Anthony J. Woodcock, Steven G. Zatzman. (54)

University Postgraduate Diplomas: Shipping Law 14†

† 1 Candidate awarded Mark of Distinction.

D.Sc. † James M. Anderson, Barbara E.C. Banks, Anthony M.J. Davis, Peter Dunnill, † Kenneth A. Kermack. (5)

Ph.D. *Anatomy and Embryology:* Phillip R. Gordon-Weeks, Vance M.D. Hall, Ghada Karmi, Bernard J. Norton, Luca Turin. *Anthropology:* Joseph R. Llobera, *Bartlett School of Architecture and Planning:* Seppo K. Aho, Richard E. Bunt, Lionel G. Ebury, Gideon B. Hanjari. *Biochemistry:* Rosemary C. Cheetham, Pedro G.M. Ferreira, Moira M. Harson, Alistair Paterson, John M. Pritchard, Leona D. Samson, Barry M. Wilson. *Biophysics:* David C. Gadsby. *Botany and Microbiology:* Ronald H. Bishop, Terence A. Brown, Huw M. Davies, John H. Dodds, Valgardur Egilsson, Ross A. Hynes, John V. Jennings, Cheryl E.J. Wallis. *Chemistry:* Kazi A. Azam, Susan E. Barrow, Peter M. Blum, Catherine L. Bryan, Graham M. Crisp, Madeleine Ennis, Maria I.P.L.C. Ferreira, Andrew I. Johns, Leonard R. Levy, Muzzammil M. Mansuri, Stephen C. Rogers, Colin J. Tredwell, Tse Man Wing, Philip C. Turtle, Timothy C. Walsgrove, Ian G. Wood. *Genetics and Biometry:* Terry D. Tipler. *Geography:* David E. Alexander, William R. Towle. *Geology:* Fakhri D.S. Al-Sawaf, Edmund O. Ayoola, Philip Bishop, Satyendra Chakravarty, Neil J. Fortey, Donald A. Goddard, Gillian B. Hamilton, Minoo Hojjatzadeh, David J. Jutson, Shawki H. Marrei, Fathollah Mojab, Morteza Seyed-Nabavi. *Mathematics:* Peter J. Budden, Erik R. Lockeberg. *Pharmacology:* John L. Beets. *Physics and Astronomy:* William Allison, Edward Brook, Radu I. Campeanu, Keith Dennis, John Griffiths, Stephen F.W. Harper, Paul F. Kaskiewicz, Khawaja Naveed Ullah, Roman Nowak, Massimo Pettini, Anthony P. Phillips, Jose M. Sanchez-Ron, Thomas Shuttleworth, Lois Steenman-Clark, Timothy R. Twomey, φ Waldimir von Schlippe. Barry Y. Welsh, Sydney L. Wright, John C. Zarnecki, Claude J. Zeippen. *Physiology:* Jonathan Ateebirenyamuhangaowanshaho, Mark R. Boyett, Alexandra R. Milne. *Psychology:* Feriha Anwar, Sara F. Berman, Caroline L. Greer, Ellen D. Hodgkin, Penelope C. Wright. *Statistics and Computer Science:* Steven A. Kent, George E. Kokolakis, Kevin J. McConway, Maria F. Neto Ramalhoto, David J. Spiegelhalter. *Zoology and Comparative Anatomy:* Peter R. Gardiner, David E. Pacey, Stephen C. Rewcastle, Frank S. Walsh. (97)

M.Phil. *Anthropology:* Lorelei J. Harris. *Geology:* Kem Chantara. *History and Philosophy of Science:* Philip H. Thonemann, Paul B. Wood. *Pharmacology:* Richard W. Clubley. *Psychology:* Daniel Goldstein. (6)

† Awarded 1976-77
φ Also registered at another Institution

M.Sc. *Architecture:* *David R. Bixby, Brian L. Burley, David K. Clarke, William L. Colledge, Vincenzo Comito, *Frederico R.B. De Hollanda, David C. Evans, Brian W. George, Anthony J.W. Haddon, Maurice Heather, Dean A. Hilborne, Andrew W. Howe, John Hudson, Ashley J. Jarrett, Huda J. Juma *George Ofori, Jean Peponis, Michael W. Stuart, *John M. Vardon, Christopher M. Warner, Michael P. Wilson, Frederick C-K Wong, Dung Yu. *Biochemical Engineering:* Michael J. Kneen, Panayotis Kontodemon. *Biochemistry:* Oswald Amoo-Gottfried, Maria Boussiou, Graham J. Cole, Lesley A. Fitton, Maria J. Gamero de Mascarenhas Saraiva, Chandra P. Le, Thomas McGold-

rick, *Nancy J. Perez de Fernandez Feo, Basil-Stelios Tselentis. *Computer Science:* Paul J. Atcherley, Aristides Clades, Murray C. Ferguson, Terence F. Forsey, Kaveh Haddad, *David J. Hill, Frank R. Klimaszewski, Panayiotis I. Michael, Bashir H. Nathoo, Richard Sproat, George I. Stewartson, *Christopher J. Tough, King Y. Yeung, Hilal M. Yousif. *Conservation:* Mary E.H. Alkins, John E. Beatty, Christopher A.J. Brown, Ole T. Cairns, Susan M. Court, Paul D. Goriup, Ruth F. Hinton, Ian R. Smith, Mohamed H. Snane, Caroline E. Steel, Geoffrey C. Wescott. *Educational Psychology:* Irene Bell, Diane M. Crawford, Elizabeth M.A. George, Dennis A. Grant, James G. Jones, Edith Lee Suk-Han, Karlo Miklausic, Anna Z. Romiszowska, Allan J. Sigston, Philip H. Stringer, Belinda J. Tincknell. *History and Philosophy of Science:* Neil D. Morgan, Jolyon D. Morris. *Hydrogeology:* Chukuemeka N. Ajandu, Hisham A. Al-Delemi, Simon G. Blackley, Armando A. Coronel Borges, Ian N. Gale, David R.C. Grey, Matthew J.R. Preston. *Information Science:* Michael J. Green. *Marine Earth Science:* Christopher Gibson-Robinson, David R. Grieve, John G. Hall, Jillian M. Hewitt, Paul J.M. Hood. *Micropalaeontology:* Rosemary D. Chester, Patrick W.M. Corbett, Caroline O. Dublin-Green, Bekir Esat, Nicholas G. Fuller, Azam Maleki Moghadam Abyaneh, Ahmed A. Memom, Mark A. Partington. *Neurological Science:* Ian M. Huxham. *Physiology:* Kevin S.R. Cuthbertson, Clare J. Fowler, Aysar F.I. Haqqi, James H. Olobo-Lalobo. *Statistics:* John H. Bacon-Shone, Janet M. Barnes, *Michael A. Baxter, Andre B. Bondi, *Denise M. Howel, John P. McKenna, Brian J. Middleton, *Lawrence I. Pettit, Graham A.F. Ross, Martin J. Shipley, Andrew R. Wood. (110)

University Postgraduate Diplomas: Material Culture 1; Social Anthropology 5ϕ

ϕ 3 Candidates awarded Marks of Distinction
* Awarded Mark of Distinction

FACULTY OF ENGINEERING

D.Sc.(Eng) † Lorenzo G. Gibilaro (1)

Ph.D. *Chemical and Biochemical Engineering:* Timothy P. Elson, Wolfgang H. Hanisch, Colin R. Thomas. *Civil and Municipal Engineering:* Ahmet H. Ataoglu, Ragaei N.M. Ayoub Girgis, Mehmet Bayer, Charalambos P. Ellinas, Lim C.F. Lam Tin Cheung, Phillip W.J. Raven, Juan I. Rodriguez Del Camino, Stephen P. Satterthwaite. *Electronic and Electrical Engineering:* Nicholoas Mavrokoukoulakis, Lakshaman M. Walpita. *Mechanical Engineering:* William A. Connor, Roger D. Hibberd, Adil H. Ridha. (16)

M.Phil. *Chemical Engineering:* Johny Manjaly, Trevor K. Parrott. *Electronic and Electrical Engineering:* Philip D.L. Williams. (3)

M.Sc. *Biochemical Engineering:* Christine R. Andrews, Gavin C. Dickie, *Jonathan R. Flint, Olusegun A. Mafe, *Andrew J. Russell. *Ergonomics:* Ayokunle Ayoola, Thomas S. Clark, Athanasius Kaponeridis, David F. Streets. *Microwaves and Modern Optics:* Garry R. Adams, Iorwerth G.A. Davies, Georgios N. Economu, Halit Erkal, Sai-Wing Fund, *Gerald D.H. Hawkins, Kan Hon Choi, Andrew T. Mead, Ronald P. Millinger, Farrokh Nikravesh, David R. Payne, David A. Sinclair, Tan Chee Hai. *Ocean Engineering (Mechanical Engineering):* Jeremy V. Dawson, Andreas Ioannou, John Meudell, Hugh

M.O. Pratt, Efstathios Theodoropoulos, C.C. Tsoukalas. *Ocean Engineering (Naval Architecture):* Zia U. Alvi, Mehmet O. Belik, Syed S.A. Bokhari, Peter A. Caridis, Muhammad T. Chaudhry, *Christos Cotsambopoulos, Roger H. Gledhill, *Kenneth D. Hook, Paul E. Lacroix, Vimal Mohindra, Nigel Moores, Peter B. Nortier, Louis R.D.A.D.G. Oliveira, Nicholas C. Ruxton, Buddhadeb Sengupta, Paul H. Tasker, Nicholas A.J. Wells, Nicholas J. Willcox, Yuon-Loon Wang. *Photogrammetry:* Julian C. Boardman, Andreas Georgopoulos, Reginald J. Gibson *Stuart I. Granshaw, Maarouf A. Mohamed, Simon T. Shreeve. *Surveying:* Martins W.A.L. Chodota, Robert Hepple. (55)

FACULTY OF MEDICINE

Ph.D. *Biochemistry:* Rubén Palacios-Romero. *Zoology and Comparative Anatomy:* Sarah E.M. Howie, David P. Lane. (3)

† Awarded in 1976-77

APPENDIX IV

COLLEGE DIPLOMA AND CERTIFICATE AWARDS

1 OCTOBER 1977 – 30 SEPTEMBER 1978

FACULTY OF ARTS

Certificate in Archive Administration: Michael Mbugua Gachie, Nwobodo Nwobodo-Ogbu. (2)

Diploma In Film Studies: Timothy Charles Painter Dean, David Maxwell Hannan. (2)

Diploma in Library and Information Studies: Brenda Allcock, Judith Dorothy Atkinson, Diana Elizabeth Bacon, Karen Fong Barrett, Hugh Douglas Brazier, Lesley Susan Mary Brench, Yves Chan Kwet Choo Chan Kam Lon, Ann Hilda Constable, Cherry Karen Edwards, Malcolm Derek Fish, Amanda Cherry Burgoyne Furber, Sally Margaret Grover, Audrey Mary Hall, Mary Elizabeth Hartley, Margaret McKinnon Hogan, Carole Holden, Linda Margaret Hubbard, Roy Henry William Johnson, Richard Kornicki, Anita Patricia Lawrence, Anne Elizabeth Le Grice, Lesley Joan Lemarquand, Dorothy Leng, Emilie Ruth Levy, Christine Li-Whei Lin, Jean Ashton Manley, Rachel Louise Morgan, Sarah Elizabeth Newton, Simon Donald Armand O'Sullivan, Keith Nicholas Huntly Parry, Anne Elizabeth Picksley, Lorna Rice, Karen Rosemary Riley, Sharon Van Deusen Sperling, Margaret Anne Walker, Rupert Johnathan MacDougall Wood, John Edward Bardwell. (37)

Certificate of Proficiency in Phonetics: Kusay Abdulmunim Ahmad, Olivio Argenti, Christine Anne Denise Armstrong, Jacqueline Augu, Virginia Baxter, Rosalinda Beckles, Claude Jeanne Boitel, Anita Margareta Dackner, Michiko Furumi, Sandra Joan Gale, Christopher Garnett, Maria Rosa Guerrieri, Moodey John Victor Gurunadham, Joanna Krystyna Hermaszewska, Brigitte Hildegard Charlotte Hurrell, Kayo Ishizaka, David Philip Jones, Joan Julia Mune, Margaret Sylvia Kennedy, Ulrike Liederwald, Vina Nora Lindsay, Angela Maria Mari, Raja Marthandan, Kazuhiko Matsuno, Mary Normana Edith Mayes, Jose Luis Otal Campo, Margarita Amelia Paulero, Antoine Polychronis Pouladakis, Wanna Pudhitanakul, Reinhold Michael Radtke, Paul John Ratcliffe, Pilar Rodriguez-Valveny, David Davy Rosewarne, Consuelo Sales, Manuel Alejandro Santibenez Zamorna, Govindarajalu Shanmugam, Eila Ester Spolander, Gray Travers Standen, Anne Symons, Alison Vivienne Thompson, Betty Karen Toth, Dominique Marie-Paule Vergoz. (42)

Certificate in Social Research (Developing Countries): Fe Rodriguez Arcinas, Edgar Enrique Baldion Waldron, Narathip Chutivongse, Korlapati Dasaratharamaiah, Maria Emilia Feliz Calderon, Mariano E. Garcia, Ram Swaroop Gupta, Ikram Husain Khan, Teresita C. Laforteza, Abel Zuana Massalee, *Belen T. Medina, Patricia Akelo Ohanga, Janice Balim Singirok, Jorge Guido Vallejo Morillo, James Dzakor Verenyol. (15)

* Awarded with Merit

FACULTY OF SCIENCE

Diploma in Conservation: Mohamed Habib Snane. (1)

Diploma in Hydrogeology: Hisham Ahmad Al Delemi, Simon Geoffrey Blackley, Armando Antonio Coronel Borges, Morteza Fayazi, Ian Newlyn Gale, Bhisom Geer, David Robert Charles Grey, Matthew James Richard Preston. (8)

Diploma in Micropalaeontology: Rosemary Doreen Chester, Patrick William Michael Corbett, Caroline Olusola Dublin-Green, Ahmad Fakhrai, Nicholas Giles Fuller, Azam Maleki Moghadam Abyaneh, Ahmed Ali Memon, Mark Anthony Partington. (8)

Diploma in Statistics: Androniki Boufi, Antony Chandra. (2)

FACULTY OF ENGINEERING

Diploma in Chemical Engineering: *Kenneth Hall, *Ashok V. Hiremath, Phillip James, Paul Jinman, Timothy John Larter, Najib Murtaza, Sundeep Kumar Ramchurn, *John Allan Trimble. (8)

Diploma in Microwave Engineering: Garry Raymond Adams, Iorweth Gwynn Aethwy Davies, Georgios Nikolaos Economou, Halit Erkal, Sai-Wing Fung, *Gerald Douglas Hugh Hawkins, Kan Hon Choi, Ronald Peter Millinger, Jubin Moshiri, Farrokh Nikravesh, David Russell Payne, David Adam Sinclair, Tan Chee Hai. (13)

Diploma in Ocean Engineering: Zia Ullah Alvi, Mehmet Omer Belik, Syed Sohail Azmat Bokhari, Peter Andrew Caridis, Muhammad Tahir Chaudhry, *Christos Cotsambopoulos, Jeremy Vernon Dawson, Roger Harry Gledhill, *Kenneth Dale Hook, Andreas Ioannou, Paul Emile Lacroix, John Meudell, Vimal Mohindra, Nigel Moores, Peter Bedford Nortier, Luis Raimundo Da Silva Duarte Gerald Oliveira, Christakis Constantine Riris, Nicholas Charles Ruxton, Buddhadeb Sengupta, Paul Hartley Tasker, Efstathios Theodoropoulos, Christos Constantine Tsoukalas, Nicholas Arthur James Wells, Nicholas James Willcox, Youn-Loon Wang. (19)

Diploma in Photogrammetry: Damiani Antanassioti, David Ainsley Evesham, Martin Harvey, Manouchehr Samavati, Martin John Smith. (5)

Diploma in Surveying: Peter John Arthur, Anne Irena Bohowicz, Michael Byron-Brown, Noel St Claver Francis, Sean Gregory Johnson, Kristian Thirlwall Norris, Ganiyu Amusa Oyeneye, Stephen Gibson Taylor, Hon-Cheong Wong. (9)

* Awarded with Distinction.

FACULTY OF ENVIRONMENTAL STUDIES

Diploma in Architecture: Paul Samuel Milford Abbott, William Paul Norman Bates, Keith Nicholas Bothwell, Toby Bridge, Richard Graham Brindley, Chong Chen Kian, Robert Arthur Collingwood, Christopher Grayson, Susan Elizabeth Mellin Harrison, Francis Ho Ying Yiu, Richard Adrian Jones, Lawrence Wychoff Kliewer, Ademola Bandele Tokunbo Pearce, Heinz Gottfried Richardson, Graham Rafe John Ryding, Leonard Aloysius Sequeira, John Anthony Simpson, Anne Sofie Skarc, Nigel Christopher Smith. (19)

Certificate in Development Planning: Adelola Adeyemi Agbabiaka, Sevim Aksoy, Isaac Adebayo Adedeji Awode, Florah Chisenga Bachumika, Gautam Basu, Bruce Geoffrey Boaden, Jose Calbazor, Arturo Calderon Zugasti, Bibhuti Kumar Chakrabarty, Luiz Roberto Lima Sobral Da Cruz, Edmund Gunapala Dharmasiriwardane, Nettikumarage Don Dickson, Pratul Kumar Dutta, Sonia Gutierrez Castro, Abdalla Hamad, Fung Kay Bella Im, Faten Alfons Ishak, Desmond Solomon Kaplan, Gathungu Kariuki, Alandur Lakshmanan, J. Antonio League, Thaung Lwin, Dindayal Mathur, Nasrullah Mir, Prabhu Nath Misra, Mpho Julius Moikangoa, Dorria Mostafa, Nicholas Elias Ngwira, Zilley Ahmad Nizami, Ahmed Abdulla Mohammed Nooman, Mohammad Nuruzzaman, Victoria Oku, Ramli Bin Othman, George Mizael Pelekamoyo, Sophon Prasidthrathsint, Josiah Riogano, Rafael Ros, In Kee Shin, Oluremilekum Olanrewaju Sonoiki, Kyaw Thein, Myriam Talavera, Sinan Ucal, Amin Hassan Amin Waly. (43)

Diploma in Development Planning: Carlos Ramon Aguillon Castillo, Hooshang Ansarifar, Maria Cristina Arriaga-Salinas, Herman Brevis Diaz, Emmanuel Mukubwa Byaruhanga, Miguel Angel Caparo Alfaro, Diego Carrion Mena, Fernando Castro Estrada, Alba Chacon Rivas, Murtaza Ahmed Choudhury, Jahar Lal Chowdhury, Douglas Vieira De Aguiar, Charles Arthur Decker, Reinaldo Jorge Dorado Ugarte, Werner Felber, Abdelmadjid Gana, Arturo Garrido Rodriguez, Ongky Sukasah Hardjakusumah, Darmanto Jatman, Neil Gilbert Karunaratne, Ernest Kowero, Kathleen Aldridge Lackowski, Tae Yul Lee, Joseph Mukasa Lusugga-Kironde, Zilton Luiz Macedo, A.S.M. Mahbub-Un-Nabi, Gladys Margot Maluenga Chirimelli, Radmila Milosevic, Abdel-Latif Mahamed Rabia, Jose Montes Narvaez, Willie Mgqibelo Mcube, Paulo Cesar Nunes De Andrade, Felipe Nunez Restrepo, Martha Esperia Lorenza Palma Vergara, Gastao Alberto Paschkes, Tahira Qamar, Hector Cirilo Ruiz Leon, Muriam Sanchex Mejia, Suvendrini Ponnamma Somasundaram, Estevam Strauss Filho, Luis Felipe Tortolero Garcia, Ana Sara Vainstoc, Ananda Swarnapala Weerasinghe, Ebrahim Zahedi Abghari, Maria Ximena Zamorano Hincapie. (45)

APPENDIX V

SCHOLARSHIPS, STUDENTSHIPS AND PRIZES COLLEGE AND UNIVERSITY AWARDS

COLLEGE AWARDS

Charlotte Ashby Prize (Laws)—M.R. Lacey.
Herbert Batsford Prize (Architecture)—M.S. Hacker.
Thomas Witherden Batt Scholarships (Science)—Carey A. Chapman, W.P. O'Donnell
Leonard Bayliss Memorial Prize (Physiology)—Elizabeth Jackson.
Francis Perch Bedford Prize (Zoology)—Marie-Anne Shaw.
Ada Heather Bigg Prizes (Political Economy)—J. Silvertown, J.G. Clarke.
Boise Scholarships (Fine Art)—Rosemary Burton, R.N. Fearns, Clare E. Froy, J.P. Gibbs, Amanda J. Havers, Kathleen A. Houghton, R. Jones, R. Koenig, Sharon Morris, N.G. Phillips, Rachel Skeet, P. Tong, P.M. Winstanley, P. Goddard.
Bonney Prize (Geology)—S.G. Hooper.
R.E. Bradbury Memorial Prize (Anthropology)—Joanna J. Verrall.
Broderick-Parry Prize (Geography)—J.P. Gant.
Margaret Browne Studentship (Zoology)—J.M. Hollands.
Building Prize (Environmental Studies)—Angela V. Phillips.
Rodney Burn Prize (Fine Art)—Jacqueline Rochester.
Chadwick Medal and Prize (Civil Engineering)—So Cheung Ping.
Churchill-Jenkinson Prize (Archive Studies)—Bridget de Boer, C. Jeens, prize equally divided.
Antonio Cippico Medal and Prize (Italian)—Christine Collier.
Lillian Clarke Prize (Botany and Microbiology)—C. Upton.
Clinton Prize (Electronic and Electrical Engineering)—D.M. Howard, G.S. Rowan, prize equally divided.
Cowley Prizes (Library and Information Studies)—P. Wentz.
Derby Scholarship (Zoology)—Diane Warrener.
Donaldson Medal (Architecture)—W. Wang.
Early English Text Society's Prize—Jacqueline Wright.
Elliot-Blake Studentship—Jean Bradbury.
Environmental Design Prize—G.E. Bone.
Fielden Research Scholarship (German)—C.J. Bates.
Sir Banister Fletcher Prize and Medal (Architecture)—L.A. Sequeira
Flinders Petrie Scholarships in Egyptian Archaeology—Lisa L. Giddy, Laverne Schnare, Rosalind Hall, C. Hope.
Foreign Student Scholarship in Arts—R. Weis.
Daryll Forde Award (Anthropology)—T. Harrison.
Edith Goodyear Prize (Geology)—K.S.G. Allack.
Eleanor Grove Scholarship for Senior Women Students (German)—Katherine J. Marles.
Eva Grunwald Memorial Prize (French)—J. Trott.
Paul Haas Studentship (Botany and Microbiology)—Frieda T. Rossouw.
Violet Hall Prize (French)—Hania Bociek, Judith Still, prize equally divided.
Hart Prizes (Photogrammetry and Surveying)—M. Harvey, K.T. Norris.
Archibald P. Head Memorial Medal and Prize (Mechanical Engineering)—P.A. Ioannou.
Heimann Medal (German)—M. Hammersley.

Henriques Scholarship (Fine Art)—Mandy Havers.
Elsie Hitchcock Prize (English)—R.A. Mitchelmore.
John Oliver Hobbs Memorial Scholarship in Modern English Literature—P. Funnell.
Hollier Scholarships in Greek—Helen M. Dermit, Mary Mantziou, Rachel Morris.
Hotine Exhibition (Photogrammetry and Surveying)—M.J. Smith.
R.B. Hounsfield Prize in Town Planning and Civic Engineering—R.H. Alty.
R.B. Hounsfield Prize in Traffic Engineering—Fok Siu Fai.
Huntingdon Research Centre Prize (Histology Part I—Medical Sciences)—Bridget S. Wilkins.
Hurst Prize in English Law—Nicola M. Lacey.
Institution of Civil Engineers Prize—Lim Kong Cheng.
Institution of Electrical Engineers Prize—M.J. Kennedy.
Institution of Mechanical Engineers Prize—J.D.M. Forbes, D.R. Tozer, prize equally divided.
Jackson Lewis Scholarships—Antonia Hunt, R.G. Parlour, Sara B. Uchitel, Ewa A. Zarkowska.
Jolowicz Prize (Roman Law)—Gail R. Jaffe.
Daniel Jones Memorial Prize (Phonetics)—Ulrike Liederwald.
Ker Memorial Prize (English)—C.W. Ford.
Kitson Prize (Chemical and Biochemical Engineering)—C.J. Langley.
Dr R. Kohn Prize (Physiology Part I—Medical Sciences)—J.P. Joseph.
Library and Information Studies Exhibitions—Susan Pargeter, Helen Ash.
Lloyd Scholarship in Modern Greek—F. Gamberini, Jennifer S. Parrott.
Sir John MacAlister Medal (Library and Information Studies)—H.D. Brazier.
Malden Scholarship (Greek)—Susan E. Fox, I. Glen.
Maxwell Law Prize—Catherine M. Newman.
Medical Postgraduate Scholarship—T.M. Asonganyi.
Merck Sharp and Dohme Ltd Prize (Biochemistry Part I—Medical Sciences)—Mary H. Austin.
Merck Sharp and Dohme Ltd Prize (Genetics Part II—Medical Sciences)—Laura A. Corr.
Sir William Meyer Essay Prize (Geography)—Catherine Middleton.
Sir William Meyer Prize (Geography)—Anne E. Green.
Sir William Meyer Travelling Studentships (History)—M.C. Abbott, M.D.W. Bell, Stella F. Bland, R.P. Gordon, A.J. Gosling, Katherine J. Hudson, Ingrid Z. Hundertmark, N.A. Kingwell, A.D. Meikle, P.J. Morris, Sarah J. Newens, Mary E. Short, Jasmine F. Tanner.
Momber Scholarship in Geology—Barbara A. Sotowicz.
Cecily de Monchaux Memorial Prizes (Psychology)—Vanessa Linney, Helena Medlik.
Rosa Morison Postgraduate Scholarship in Arts—Jennifer Parrott.
Rosa Morison Scholarship in English Language and Literature—Caroline A. Slocock.
Morley Medal (Modern English Literature)—Caroline A. Slocock.
Morris Prize (Geology)—Louise Cardon.
Douglas Murray Scholarship in Egyptology—C.N. Reeves.
Margaret Murray Prize in Egyptology—Vivien Raisman, Suzanne Lax, prize equally divided.
Catherine Maude Pearce Scholarship for Senior Women Students—Sharon M. Morris.
Platt Prizes (Greek)—Kathryn J. Denyer, Alison F. Quant, N.A. Shields.
Political Economy Scholarship—Rosalind Altman.
Harry Poole Prize (Chemistry)—N.G. Angold.
Postgate Prize (Classical Philology)—C.D. Mitchell.

Ramsay Memorial Medal (Chemistry)—A.J. Garman.
Mary Rischgitz Prize (Fine Art)—Clare Froy.
Graham Robertson Travelling Scholarships (Fine Art)—N. Phillips, Rosemary Burton.
Robert Ross Scholarship in Fine Art—P. Turpin.
Sharpey Physiological Scholarship—Joan Dawson.
Slade Prizes—Sharon Morris.
Hugh Smith Memorial Prize (English)—Hansi Kingston.
Smith Kline and French Laboratories Ltd Prize (Medical Sciences)—Susan C. Minnis.
The Stanbury Scholarship in Stage Design—Ingrid Hörlin.
Steer Prizes (Fine Art)—Rachel Skeet.
Stevenson Prize (Applied Mathematics)—D.J. Ives.
Sully Scholarship (Psychology)—G. Gergely.
C.A.R. Tayler Prize (Physics and Astronomy)—L.D. Jones.
Sir Andrew Taylor Prize in Architecture—P.S.M. Abbott.
Henry Tonks Prize (Fine Art)—P.M. McGuffog.
Troughton Scholarship—M.A. Cheetham.
Tuffnell Scholarships (Chemistry)—K.G. Bilyard, M.R. Draper.
A.J.V. Underwood Exhibition (Chemical Engineering)—Thrinayani J. Narendranathan.
L.F. Vernon-Harcourt Prize (Civil Engineering)—J. Tan Kwong Yew.
Viking Society Prize—G. Cosser.
Ellen Watson Memorial Scholarship in Applied Mathematics—A.S. Rosen.
Webber Prize (Laws)—Gail R. Jaffe.
Dr D.T. Whittet Prize (Pharmacology Part II—Medical Sciences)—Amanda J. Ramirez.
Audrey Wykeham Prize (Fine Art)—Lucie Geser.

FACULTY MEDALS AND PRIZES

Engineering: Goldsmid Medal and Prize—J. Tan Kwong Yew.
Environmental Studies: Medal and Prize—Maria Vassiliadou.
Laws: Andrew Medal and Prize—Catherine M. Newman.
Medical Sciences: Medal and Prize—Claire E. Powell.
Science: Medal and Prize—C.R. Petts.

SESSIONAL PRIZES

Anthropology: Rosa Morison Prize—Penny E. Jenden. *Kaberry Prize*—Helen King.
English: Campbell Clarke Scholarships—(1) A.J.D. Boylan, (2) I. Haywood. *West Scholarship*—N.J.S. Rennie.
Fine Art: Coldstream Prize—C. Holloway. *Monnington Prize*—Heleni Dorees.
French: Rosa Morison Prizes—(1) Amanda Robertson, (2) Mary Wilson, (3) W. Fleming.
Geography: College Prize—Ruth C. Sawtell, Karen E. Roberts, prize equally divided. *H.C. Darby Prize*—J.G. Clarke, Deborah H. Potts, prize equally divided. *Maconochie Prize*—A.G. Brown. *1903 Prize*—R. Fanthorpe.
German: Robertson Prize—Mandy J. Jackson. *Willoughby Prize*—Ingrid Miller.
Greek: Long Prize—Sally A. Baldwin.
History of Art: Gombrich Prize—Rachel Scott. *Wittkower Prize*—Anna Moszynska.
Italian: Sir Anthony Panizzi Prize—Patricia Stanzione, Rosalinda Beccles, prize equally divided.

Latin: Key Prize—P.A. Fox.

Philosophy: Dawes Hicks Scholarships—G.L. Evans, Andrienne P. Pyne, Wendy E. Leake, prizes equally divided.

Phonetics and Linguistics: Harold E. Palmer Prize—Susan Corrigan.

Political Economy: Hume-Lloyd Scholarships—(1) P.A. Brice, (2) K.R. Carter, (3) C.A. Hopkins, (4) L.H. Kwek, (5) H.L. Leon, (6) K.M. Mudford, (7) N. Panayiotopoulou, (8) A.C. Saul.

Scandinavian Studies: Rosa Morison Prize—S. Walton. *Crabtree Prize*—J. Sills.

Spanish and Latin American Studies: Alcala Galiano Prize—Irene Matthews.

Laws: Andrews Prizes—(1) Nicola M. Lacey, (2) M.R. Lacey, (3) A.K. Walkling, (4) Jennifer M. Marr, (5) N.J. King.

Architecture: Bartlett Prizes—(1) P.R. St John, (2) D.L. Green, (3) C.A. Gore.

Botany and Microbiology: Darwin Prize—M.A. Hutchinson. *Robert Hooke Prize*—Jane Skok.

Chemistry: C.K. Ingold Prizes—(1) Ann P. Davies, (2) Hilary J. Beazley, (3) J.D. Fisher.

Geology: Chubb Prize—A.R. Driscole. *Hollingworth Prize*—J.R. Wardle.

Mathematics: Filon Prize—E. Ginn Wing Lui. *Hill Prize*—P.G.J. Sands. *Jeffery Prize*—Mariette C. Davies.

Pharmacology: H.O. Schild Prize—P. Griffin.

Physics and Astronomy: William Bragg Prize—D. Waxman. *Oliver Lodge Prize*—Yau-Tai Lam. *Wood Prize*—P.J. Fitch. *Huggins Prize*—R.G. Parlour.

Physiology: Foster Prize—N. Kotecha. *Sanderson Prize*—S. Sharma.

Psychology: Burt Prize—M. Gainsborough. *McDougall Prize*—Julie Marsh. *Spearman Prize*—Ewa A. Zarkowska.

Statistics and Computer Science: Egon Pearson Prize—Julie Robinson. *Karl Pearson Prize*—Janet B. Rawlinson.

Zoology: Zoology Prizes—(1) D. Huxtable, (2) Janice Allen.

Chemical and Biochemical Engineering: Goldsmid Prizes—(1) N.R. Kankiwala, (2) P. Bradley.

Civil and Municipal Engineering: Goldsmid Prizes—(1) Chan Cheow Bin, (2) Lai Poi Kee, (3) Wong R. Koon Sang.

Electronic and Electrical Engineering: Goldsmid Prizes—(1) M.J. Hay, (2) C. Dimitropoulos, (3) K.R. Frewin.

Mechanical Engineering: Goldsmid Prizes—(1) P.A. Oliver, (2) I.C. Kokkinos.

Medical Courses—Part I Examination: Drummond Prize in Biochemistry—L. Loizou. *Glaxo Prize for Best Aggregate Performance in Part I*—J.P. Joseph. *I.C.I. Prize in Anatomy*—J.P. Joseph. *I.C.I. Prize in Physiology*—L. Loizou.

Medical Courses—Part II Examination: Cluff Prize in Physiology—M.R. Jarmulowicz. *Cuxson Gerrard Prize in Pharmacology*—Laura A. Corr. *Drummond Prize in Biochemistry*—T.E. Martin. *Elga Prize in General Pathology*—M.R. Jarmulowicz. *Suckling Prize in Neurosciences and Behavioural Sciences*—Rosamund M. Pope. *Wellcome Prize in Human Biology*—H.J. Amin. *Wyeth Prize for Best Aggregate Performance in Part II*—Rosamund M. Pope.

Second Examination in Dental Surgery: Anatomy Prize—A.L. Lovat, G.S. Simmons, prize equally divided. *Physiology Prize*—P.J. Ramshaw.

Anthropology: M.C. Donmall (3rd year). *Architecture:* J. Peponis (2nd year). *Chemical Engineering:* P. Papaloizou (1st year). *Chemistry:* Z. Kisiel (3rd year). *Philosophy:* Dawn Holmes (2nd year), H.R. Upton (1st year). *Physics:* V. Goetcherian (3rd year). *Zoology:* J.M. Hollands (2nd year).

APPENDIX VI

BENEFACTIONS, DONATIONS, RESEARCH GRANTS AND CONTRACTS

The College Committee makes grateful acknowledgement of the following:

THE ANCASTER TRUST

£1,000 for the Department of Anatomy and Embryology (Sub-Department of the History of Medicine), in support of field research.

ANGLO-AUSTRIAN OBSERVATORY

£27,212 for the Department of Physics and Astronomy for the construction of an external memory of the Image Photon Counting System.

AUDITS OF GREAT BRITAIN LTD

£400 for the Department of Electronic and Electrical Engineering for the development of experimental transponders.

BASS PRODUCTION LTD

£500 for the Department of Botany and Microbiology for the purchase of laboratory materials.

DR J. BOURNE BENSON (THE LATE)

A bequest of £34,150.27 under the will of the late Dr J. Bourne Benson, for the establishment of a fund to be known as the 'J.B. Benson Bursary Fund' to assist promising and deserving students of the College. [Dr Benson was a student of the College from 1864 to 1873; elected a Fellow of the College in 1874; and a member of the College Committee from 1907 to 1922. He died on 14 November 1930.]

THE BRITISH ACADEMY

£11,425 for work in the Department of Greek on unpublished oxyrhynchus papyri.

BRITISH ANTARCTIC SURVEY

£1,000 for the Department of Photogrammetry and Surveying for a computation and statistical analysis of the British Antarctic Survey's networks.

BRITISH DIABETIC ASSOCIATION

£16,604 and £1,325 for the Department of Biochemistry for research on hormonal regulation of triglyceride synthesis in adipose tissue.

BRITISH HEART FOUNDATION

(1) £5,897 for the Department of Biochemistry for the regulation of adenine nucleotide pool size in cardiac muscle.

(2) £1,250 for the Department of Biophysics for research on cardiac cells calcium regulation.

(3) £8,493 for the Department of Physiology for the study of calcium transients in heart muscle.

(4) £2,160 for the Department of Physiology for the study of activation processes in skinned cardiac muscle fibres.

THE BRITISH LIBRARY

(1) £14,900 for the School of Library, Archive and Information Studies for the study of interactive information networks.

(2) £8,238 for the School of Library, Archive and Information Studies for the study of international co-operation in information systems.

(3) for the Department of Statistics and Computer Science, the loan of a Kalle Dacom Facsimile Transceiver, value £9,546.

(4) £1,300 for the Department of Statistics and Computer Science for studies in facsimile technique for on-line computer networks.

BRITISH RAILWAYS BOARD

£552 for the Department of Electronic and Electrical Engineering for miniature transponder development.

CANCER RESEARCH CAMPAIGN

(1) £11,242 for the Department of Anatomy and Embryology for research on cells.

(2) £9,228 for the Department of Anatomy and Embryology for S.I.K.R. research.

(3) £180 for the Department of Anatomy and Embryology for the determination and differentiation of teratocarcinoma cells.

(4) £29,382 and £1,700 for the Departments of Biochemistry and Anatomy and Embryology for the development of a test system for carcinogens and research on biosynthesis and induction of Cytochrome P450 in rat liver.

(5) £6,587 and £369 for the Department of Botany and Microbiology for research on nucleic acid metabolism in mitochondria.

(6) £6,681 for the Department of Human Genetics and Biometry for research on mitotic cycle time and rates of cell proliferation.

(7) £3,105 for the Department of Human Genetics and Biometry for studies of chromosomes and cell genetics in colon polyps.

JONATHAN CAPE LTD.

£75 p.a. for seven years in support of the 'Neale Lecture in English History'.

JANE COFFIN CHILDS MEMORIAL FUND FOR MEDICAL RESEARCH

$2,000 for the Department of Zoology and Comparative Anatomy for Research Expenses.

COMMISSION OF THE EUROPEAN COMMUNITIES

£29,297.50 for the Department of Botany and Microbiology for the investigation of properties of the primary electron acceptor complex of Photosystem I.

THE ERNEST COOK TRUST

£3,000 for the Bartlett School of Architecture and Planning for the study of National Parks.

COUNCIL FOR EDUCATIONAL TECHNOLOGY

£3,070 for the Department of Physics and Astronomy for computers in the Undergraduate Science Curriculum Development Project.

DANISH MINISTRY OF EDUCATION

£150 and £150 for the Department of Scandinavian Studies in support of the Nordic Guest Professors' Visiting Scheme.

DELANDALE LABORATORIES LTD.

£16,555.91 for the Department of Pharmacology for the Delandale Research Studentship for the study of lithium and drugs of dependence.

DEPARTMENT OF AGRICULTURE AND FISHERIES IN SCOTLAND

Research training support grants totalling £150.

DEPARTMENT OF ENERGY

£37,863 for the Department of Civil and Municipal Engineering for the testing of small-scale models of stiffened steel cylinders.

DEPARTMENT OF THE ENVIRONMENT

(1) £2,606 and £1,950 for the Bartlett School of Architecture and Planning for the study of employment in the construction industry.

(2) £21,913 for the Department of Civil and Municipal Engineering for the study of the effect of traffic volume and other factors on road user behaviour.

(3) £19,971 for the Department of Civil and Municipal Engineering for the identification of patterns of structural failure in buildings.

(4) £19,022 for the Department of Civil and Municipal Engineering for the study of the effects of changes in land use on travel by public transport.

(5) £14,065 for the Department of Civil and Municipal Engineering for the analysis of injury in road accidents.

(6) £9,993 for the Department of Civil and Municipal Engineering for the study of specified features of road accidents related to vehicle safety.

(7) £9,582 for the Department of Civil and Municipal Engineering for research on the effect of ageing on driver awareness of traffic hazards.

(8) £14,999 for the Department of Geography for the study of the impact of office development in the Inner City.

(9) £7,671 and £892 for the Department of Geography for the production of a model to predict ice formation on roads.

DEPARTMENT OF HEALTH AND SOCIAL SECURITY

£13,112 for the Department of Mechanical Engineering for the study of problems arising from abnormal weight-bearing.

DEPARTMENT OF INDUSTRY

£3,000 for the Department of Physics and Astronomy for the study of computer analysis of texture in remote sensing images.

DIAMOND RESEARCH COMMITTEE

£1,250 for the Department of Chemistry for diamond research.

EUROPEAN SPACE AGENCY

(1) £33,150 for the Department of Physics and Astronomy for the evaluation of a Photon Detector Assembly.

(2) £5,601 for the Department of Physics and Astronomy for the expenses of collaboration in EXOSAT experiment development programme.

ESSO PETROLEUM CO. LTD.

£2,450 for the Department of Chemical and Biochemical Engineering for a Research Studentship.

FORK TRUCK TRAINING LTD

£1,033 for the Department of Psychology for the study of training needs and tests of fork truck operators.

MR ANTHONY S. FORSTER

A gift to the Department of Greek of a selection of books from the library of his father, E.S. Forster, formerly Professor of Greek in the University of Sheffield.

FURTHER EDUCATION CURRICULUM REVIEW AND DEVELOPMENT UNIT

£28,162 for the Department of Psychology for the study of the learning styles of young people post-16.

MR H. GRUNWALD

£120 to enable the 'Eva Grunwald Memorial Prize' to be increased from £20 to £30 per session.

HEALTH AND SAFETY EXECUTIVE

£8,740 and £642 for the Department of Human Genetics and Biometry for the study of genetic abnormalities induced by asbestos and other dusts.

HOME OFFICE

£400 for the Department of Electronic and Electrical Engineering for the development of microwave transponders for remote telemetry.

INSTITUTE OF CANCER RESEARCH

£300 p.a. for three years for the Department of Electronic and Electrical Engineering for a CASE studentship.

INSTITUTE OF MEDICAL RESEARCH

£500 p.a. for three years for the Department of Electronic and Electrical Engineering for a CASE studentship.

IMPERIAL CHEMICAL INDUSTRIES LTD

(1) £6,382 and £440 for the Department of Biochemistry for the degranulation of endoplasmic reticulum as a short term carcinogenicity test.

(2) Equipment to the value of £2,044.56, previously on loan, now donated to the Chemistry Department.

JOINT COMMITTEE ON POWDER DIFFRACTION STANDARDS

£6,000 for the Department of Chemistry for the study of powder data of precursors of liquid crystals.

DR L. MARGARET KERLY

£750 in support of the 'Drummond Medical Sciences Sessional Prizes'.

LEUKAEMIA SOCIETY OF AMERICA, LTD.

$2,480 for the Department of Zoology and Comparative Anatomy for Research Fellowship Institutional costs.

THE LEVERHULME TRUST FUND

£5,700 for the Departments of History and English Language and Literature for the preparation of a new edition of the Domesday Book.

LOCAL GOVERNMENT TRAINING BOARD

£8,807 for the Department of Physiology for the study of learning techniques for driver training.

MEDICAL RESEARCH COUNCIL

(1) £44,473 for the Department of Anatomy and Embryology for the study of factors controlling early development of nerve and muscle cells.

(2) £35,204 for the Department of Anatomy and Embryology for the analysis of hippocampal place units in the rat.

(3) £30,172 and £538 for the Department of Anatomy and Embryology for research on the role of adenine nucleotides and nucleosides in skin inflammation.

(4) £27,277 and £538 for the Department of Anatomy and Embryology for research on surgical microvascular anastamosos.

(5) £24,736 and £146.25 for the Department of Anatomy and Embryology for immunochemical and electrophysiological studies of enteric neurones in culture.

(6) £22,824 for the Department of Anatomy and Embryology for the evaluation of the uses of haemopoietic stem cell markers.

(7) £2,957 for the Department of Anatomy and Embryology for the study of changes in proteins during first steps of mammalian embryonic cell differentiation.

(8) £1,936 for the Department of Anatomy and Embryology for the study of the control of the formation of neuromuscular connections.

(9) £1,600 for the Department of Anatomy and Embryology for the characterisation of transmitter receptor sites in isolated brain synaptic membranes.

(10) £1,200, £120 and £74 for the Department of Anatomy and Embryology for the study of synaptic organisation in sensory pathways of mammals and birds.

(11) £971 for the Department of Anatomy and Embryology for the study of properties of excitable cells during induction and early differentiation.

(12) £447 for the Department of Anatomy and Embryology for research on the role of direct cell to cell communication during early development.

(13) £25,684 for the Department of Biochemistry for the study of the regulation of enzymes of phosphatidate synthesis in liver mitochondria.

(14) £478 for the Department of Biochemistry for the study of transcriptional control of ribosomal RNA synthesis.

(15) £100 for the Department of Biophysics for research on the mechanisms of the synaptic function.

(16) £2,897 for the Department of Botany and Microbiology for research on mutagenic interaction in Coprimus lagopus.

(17) £24,718 for the Department of Chemistry for the identification of the humoral factor responsible for compensatory renal hypertrophy.

(18) £250 for the Department of Chemistry for the study of the pharmacological properties of isolated guinea pig and other mast cells.

(19) £24,809 for the Department of Pharmacology for research on the effects of catecholamines on the ionic permeability of liver, fat and salivary gland cell membranes.

(20) £49,232 for the Department of Physiology for the study of the mechanism of contraction in single muscle fibres.

(21) £28,281 for the Department of Physiology for the study of control of anticonvulsant therapy in epilepsy.

(22) £20,234, £905 and £600 for the Department of Physiology for the calorimetric study of energy changes during ATP hydrolysis.

(23) £11,577 and £273 for the Department of Zoology and Comparative Anatomy for research on the immunology of the nervous system.

(24) Research training support grants totalling £15,375.

MILES LABORATORIES LTD

(1) £300 p.a. for three years for the Department of Chemical and Biochemical Engineering for a CASE studentship.

(2) £500 p.a. for three years for the Department of Pharmacology for a CASE studentship.

MINISTRY OF DEFENCE

(1) £3,520 for the Department of Civil and Municipal Engineering for the study of international design formulae for stress analysis of lightweight military structure.

(2) £23,124 and £165 for the Department of Electronic and Electrical Engineering for research on circular arrays for shipborne communications.

(3) £11,078 and £67 for the Department of Electronic and Electrical Engineering for the study of direct optical modulation for Data Highway.

(4) £9,597 for the Department of Electronic and Electrical Engineering for research on miniaturised field focussing filters.

(5) £9,005 for the Department of Electronic and Electrical Engineering for the study of hybrid modes in lossy coaxial cables.

(6) £7,541 and £86 for the Department of Electronic and Electrical Engineering for the realisation of microwave circuit functions using acoustic surface waves.

(7) £6,523 and £158 for the Department of Electronic and Electrical Engineering for research on the use of optical fibres to receive and multiplex acoustic signals from sonar transducer arrays.

(8) £800 and £191 for the Department of Electronic and Electrical Engineering for studies on a high resolution array signal processing radar system.

(9) £198,500 for the Department of Mechanical Engineering for academic training for students of the Royal Corps of Naval Constructors.

(10) £18,357 for the Department of Mechanical Engineering for research on fatigue crack growth.

(11) £10,975 for the Department of Mechanical Engineering for research on the control of submersible vehicles in the vertical plane during a high speed turn.

(12) £7,696 for the Department of Phonetics and Linguistics for the study of listener identification of languages on the basis of prosodic features.

(13) £300 for the Department of Physics and Astronomy for tropospheric-stratospheric tidal investigations.

(14) £19,997 for the Department of Statistics and Computer Science for the study of computer network problems.

(15) £13,132 for the Department of Statistics and Computer Science for the use of ARPANET services.

(16) £5,240 for the Department of Statistics and Computer Science for the study of Kalman Filter Algorithms for association and prediction.

(17) £1,625 for the Department of Statistics and Computer Science for the study of software problems in computer networks.

MINISTRY OF EDUCATION FOR NORTHERN IRELAND

Research training support grants totalling £300.

MUSCULAR DYSTROPHY ASSOCIATION

(1) $1,000 for the Department of Anatomy and Embryology for a Fellowship Institutional Allowance.

(2) $30,640 for the Department of Physiology for studies of the mechanical properties of and fluorescence changes in single muscle fibres.

MUSCULAR DYSTROPHY GROUP OF GREAT BRITAIN

(1) £7,530 for the Department of Anatomy and Embryology for research on nerve muscle connection.

(2) £6,139 for the Department of Anatomy and Embryology for research on the development of membrane properties of slow and fast muscles.

(3) £2,498 for the Department of Anatomy and Embryology for research on the innervation of slow and fast mammalian skeletal muscle.

NATIONAL ENVIRONMENT RESEARCH COUNCIL

(1) £2,887 for the Department of Chemistry for the study of Jurassic stratigraphy and ammonoid palaeontology.

(2) Research training support grants totalling £3,900.

NATIONAL FUND FOR RESEARCH INTO CRIPPLING DISEASES

(1) £474 for the Department of Anatomy and Embryology for research on the immunological basis of response to sensory nerve myelin.

(2) £1,117 for the Department of Human Genetics and Biometry for research on the causes of anencephaly, spina bifida, etc.

(3) £392 for the Department of Zoology and Comparative Anatomy for the study of mechanisms in disease of the nervous system and muscle.

NATIONAL INSTITUTES OF HEALTH

$37,085 for the Department of Zoology and Comparative Anatomy for a workshop meeting on the manipulation of the immune response in cancer.

NATIONAL PHYSICAL LABORATORY

£300 p.a. for three years for the Department of Physics and Astronomy for a CASE studentship.

NATIONAL RESEARCH DEVELOPMENT CORPORATION

(1) £8,500 for the Department of Electronic and Electrical Engineering for research on dipole mode VHF cable.

(2) £7,633 for the Department of Photogrammetry and Surveying for the design and development of a polar alidade plotter.

NATIONAL SCIENCE FOUNDATION

$300 for the Department of Zoology and Comparative Anatomy for a Fellowship Institutional Allowance.

NORTH ATLANTIC TREATY ORGANIZATION

(1) B.Fr. 120,000 for the Department of Chemistry for research on complementary dioxabicyclizations.

(2) B.Fr. 80,000 for the Department of Chemistry for research on homolytic reactions involving small-ring compounds.

(3) B.Fr. 60,000 for the Department of Chemical and Biochemical Engineering for studies of pyrolysis in fluidized and spouted particle beds.

THE NUFFIELD FOUNDATION

(1) £9,342 for the Bartlett School of Architecture and Planning for the study of national parks.

(2) £229 for the Bartlett School of Architecture and Planning for the study of the management of the urban environment.

(3) £12,522 for the Department of Civil and Municipal Engineering for the writing of books on the car market and on urban transport and land use.

PAUL INSTRUMENT FUND COMMITTEE

£21,000 for the Department of Electronic and Electrical Engineering for the construction of coaxial six-port directional couplers.

PILKINGTON P.E. LTD

£650 for the Department of Electronic and Electrical Engineering for the study of the relationship between the refractive index and acoustic velocity in germanium.

PLESSEY RADAR RESEARCH CENTRE

£300 p.a for three years for the Department of Electronic and Electrical Engineering for a CASE studentship.

THE POST OFFICE CONTRACTS DIVISION

£985 for the Department of Electronic and Electrical Engineering for ion etching experiments.

PYE TELECOMMUNICATIONS LTD.

£300 p.a. for three years for the Department of Physics and Astronomy for a CASE studentship.

SIR JOHN ROTHENSTEIN

A painting of Sir William Rothenstein for the College Art Collections.

THE ROYAL NATIONAL INSTITUTE FOR THE DEAF

£21,275 for the Department of Phonetics and Linguistics for research on electro-cochlear stimulation.

ROYAL NAVAL PHYSIOLOGICAL LABORATORY

£500 for the Department of Biochemistry for the study of biochemical changes during chronic hyperoxia.

THE ROYAL SOCIETY

(1) £15,182 for the Department of Anatomy and Embryology for the Henry Head Research Fellowship for Dr S.M. Zeki.

(2) £7,692 for the School of Library, Archive and Information Studies for a Scientific Information Research Fellowship.

(3) £645 for the School of Library, Archive and Information Studies for the re-editing and indexing of the list of the Karl Pearson Archive.

SCIENCE RESEARCH COUNCIL

(1) £13,644 for the Department of Biochemistry for a study of a comparison of wild type and mutant amidases.

(2) £5,950 for the Department of Biochemistry for a study of the cloning of CDNA derived from purified tract testis protamine MRNA.

(3) £10,286 for the Department of Botany and Microbiology for the study of photosynthetic electron transport.

(4) £116,825 for the Department of Chemical and Biochemical Engineering for a Biochemical Engineering study to improve protein processing.

(5) £20,283 for the Department of Chemical and Biochemical Engineering for research on precipitation from solution.

(6) £40,123 for the Department of Chemistry for the investigation of simple hydrogen bonded complexes A=H...B in the gas phase by microwave spectroscopy.

(7) £24,930 for the Department of Chemistry for the study of principles that determine the three dimensional structures and allosteric interactions.

(8) £19,264 for the Department of Chemistry for the investigation of linear-chain mixed-valence complexes.

(9) £12,050 for the Department of Chemistry for studies of microclimates in organic molecular aggregates.

(10) £11,450 for the Department of Chemistry for research on the heats of formation of ions in the gas phase.

(11) £11,028 for the Department of Chemistry for the study of Raman, resonance Raman and electronic spectroscopy.

(12) £10,950 for the Department of Chemistry for the synthesis of strained bicyclo alkenes.

(13) £10,950 for the Department of Chemistry for the total synthesis of germacrane sesquiterpenes.

(14) £10,650 for the Department of Chemistry for the study of the theory of anharmonicity in molecular crystals.

(15) £10,400 for the Department of Chemistry for studies of the mechanism and scope of some novel organic syntheses.

(16) £10,400 for the Department of Chemistry for the study of the synthesis and reactions of prostaglandin enderoperoxide model compounds.

(17) £10,350 for the Department of Chemistry for the electrogeneration of transient organometallic radicals for ESR spectrometry.

(18) £8,675 for the Department of Chemistry for the study of the nature of retained damage in diamond and its mineral inclusions.

(19) £8,275 for the Department of Chemistry for the study of homolytic autoxidation of organometallic compounds.

(20) £2,450 for the Department of Chemistry for an Outgoing Senior Visiting Fellowship for Dr P.J. Garratt.

(21) £2,904 for the Department of Chemistry for a Senior Visiting Fellowship.

(22) £661,614 for the Department of Civil and Municipal Engineering and the Department of Mechanical Engineering for Marine Technology projects.

(23) £1,068 and £450 for the Department of Civil and Municipal Engineering for a Senior Visiting Fellowship.

(24) £361,322 for the Department of Electronic and Electrical Engineering for a Microwave Research Unit for devices and systems research in microwaves, optics and acoustics.

(25) £9,160 for the Department of Electronic and Electrical Engineering for the study of atmosphere propagation phenomena at 60 GHz in a town environment.

(26) £622 for the Department of Electronic and Electrical Engineering for a Senior Visiting Fellowship.

(27) £9,800 for the Department of Mathematics for studies on semilinear elliptic eigenvalue problems.

(28) £1,000 for the Department of Mathematics for studies in subsonic turbulent separated flow.

(29) £429,000 and £10,000 for the Department of Physics and Astronomy for geophysical and astronomical research in space.

(30) £196,718 for the Department of Physics and Astronomy for the Bubble Chamber Film Analysis, 1978/81.

(31) £184,507 for the Department of Physics and Astronomy for the Dynamics Explorer Interferometer.

(32) £90,160, £31,627 and £1,630 for the Department of Physics and Astronomy for optical astronomy with the U C L Image Photon Counting System.

(33) £88,238 for the Department of Physics and Astronomy for the use of the Image Photon Counting Device for the Northern Hemisphere Observatory Project.

(34) £54,581 for the Department of Physics and Astronomy for studies of planetary atmospheres.

(35) £52,087 and £4,167 for the Department of Physics and Astronomy for studies of radiative and dynamical properties of planetary atmospheres.

(36) £47,824 for the Department of Physics and Astronomy for a balloon programme to measure middle atmosphere winds.

(37) £35,736 for the Department of Physics and Astronomy for an Advanced Fellowship.

(38) £33,262 for the Department of Physics and Astronomy for differential inverse Bremstrahlung measurements.

(39) £29,279 for the Department of Physics and Astronomy for the study of the evolution of stellar gas clouds.

(40) £25,875 and £2,000 for the Department of Physics and Astronomy for the expenses of participation in the I.U.E. project.

(41) £19,858 for the Department of Physics and Astronomy for studies in ultra-violet astronomy with International Ultraviolet Explorer.

(42) £16,349 for the Department of Physics and Astronomy under an agreement with the Rutherford High Energy Laboratory, for studies of exclusive hadrionic processes at large transverse momentum.

(43) £14,120 for the Department of Physics and Astronomy for the study of the Martian atmosphere during the extended Viking Mission.

(44) £12,247 for the Department of Physics and Astronomy for the ionization of atoms and molecules by metastable rare gas atoms.

(45) £11,605 for the Department of Physics and Astronomy for interpretations of the Solar Maximum Mission.

(46) £11,556 for the Department of Physics and Astronomy for Film Analysis: the improvement of PDP 11/34.

(47) £11,150 for the Department of Physics and Astronomy for infra-red astronomy from Tenerife.

(48) £10,650 for the Department of Physics and Astronomy for research on low energy atom-atom scattering.

(49) £10,476 for the Department of Physics and Astronomy for research on slow and stopped K-Physics.

(50) £9,967 for the Department of Physics and Astronomy for the excitation of forbidden lines in heavier ions.

(51) £7,898, £2,798, £2,508, £2,483, £1,362, £1,340 and £1,330 for the Department of Physics and Astronomy for observations at AAO.

(52) £5,390 for the Department of Physics and Astronomy for the study of neutrino and anti-neutrino interactions.

(53) £5,198 for the Department of Physics and Astronomy for the study of atmospheric structure and dynamics.

(54) £5,086 for the Department of Physics and Astronomy for a Senior Visiting Fellowship.

(55) £4,618 for the Department of Physics and Astronomy for the study of the collapse of interstellar gas clouds.

(56) £4,605 for the Department of Physics and Astronomy for optical studies of ultra-violet objects.

(57) £4,313 for the Department of Physics and Astronomy for infra-red spectroscopy of astronomical objects from Hawaii.

(58) £3,375 and £318 for the Department of Physics and Astronomy for observations at Tenerife and RGO.

(59) £3,270 and £85 for the Department of Physics and Astronomy for observations at Hale Observatories.

(60) £3,158 for the Department of Physics and Astronomy for the 1977/78 HLC Extension.

(61) £2,750 and £1,950 for the Department of Physics and Astronomy for studies in ultra-violet astronomy.

(62) £2,043 for the Department of Physics and Astronomy for D and E region aeronomy at Arenosillo.

(63) £1,785, £837, £808 for the Department of Physics and Astronomy for observations at SAAO.

(64) £1,680, £1,508, £1,457 and £573 for the Department of Physics and Astronomy for Senior Visiting Fellowships.

(65) £1,475 for the Department of Physics and Astronomy for studies of the interstellar medium.

(66) £1,266 for the Department of Physics and Astronomy for the computation of stellar atmosphere models.

(67) £1,250 for the Department of Physics and Astronomy under an agreement with the Rutherford High Energy Laboratory, for the development of equipment for the study of hadrionic processes.

(68) £1,070 for the Department of Physics and Astronomy for photometry of ultraviolet stars.

(69) £990 for the Department of Physics and Astronomy for participation in NASA AMPS working group meetings.

(70) £950 for the Department of Physics and Astronomy for observations at C T I Observatory, Chile.

(71) £862 and £250 for the Department of Physics and Astronomy for a Coudé spectral survey of bright southern late B stars.

(72) £810 for the Department of Physics and Astronomy for observations at SAAO and RGO.

(73) £466 for the Department of Physics and Astronomy for a collaborative programme of high resolution ultraviolet astronomy.

(74) £350 for the Department of Physics and Astronomy for calculations of low-energy electron-molecule scattering cross sections.

(75) £164 and £70 for the Department of Physics and Astronomy for observations at RGO.

(76) Allocation of time on the Rutherford Laboratory Computer for the Department of Physics and Astronomy for calculations for atom-atom scattering processes.

(77) £28,764 for the Department of Statistics and Computer Science under an agreement with the Rutherford High Energy Laboratory, for the provision of computer services for U.K. research workers on the U.S. ARPA Computer Network.

(78) £18,460 for the Department of Statistics and Computer Science for the study of communication protocols in the content of X-25 computer networks.

(79) £4,650 for the Department of Zoology and Comparative Anatomy for research on epidermal sensory cells in fishes.

(80) Research training support grants totalling £37,575.

G. D. SEARLE & CO. LTD.

£12,500 for the Department of Chemical and Biochemical Engineering for the isolation and immobilisation of certain enzyme systems.

SIRA INSTITUTE LTD

£300 p.a. for three years for the Department of Physics and Astronomy for the research and development of X-ray imaging detectors.

SMITH KLINE AND FRENCH FOUNDATION

(1) £650 for the Department of Pharmacology for the study of the role of lithium in experimental alcohol addiction.

(2) $1,250 for the Faculty of Medical Sciences in support of the Smith Kline and French Lectureship Fund.

SOCIAL SCIENCE RESEARCH COUNCIL

(1) £2,660 for the Department of Anthropology for the study of the ethnography of the Dowayo, Northern Cameroon.

(2) £503 for the Department of Anthropology for the study of themes in Papua New Guinea Highlands ethnography.

(3) £15,203 for the Bartlett School of Architecture and Planning for a political analysis of British rural conservation issues and politics.

(4) £2,176 for the Bartlett School of Architecture and Planning for the study of the distributional effects of ownership and control of land users.

(5) £1,056 for the Bartlett School of Architecture and Planning for the expenses of an exchange scientist.

(6) £24,897 for the Department of Geography for the study of land for informal recreation.

(7) £9,910 for the Department of Geography for the study of the historical geography of the Western Torres Strait Islands.

(8) £276 for the Department of Geography for a projection of non-renewable mineral demands in Western Europe.

(9) £85 for the Department of Laws for travelling expenses to a French/British seminar.

(10) £10,145 for the Department of Phonetics and Linguistics for the study of language typology and linguistic universals.

(11) £7,822 for the Department of Phonetics and Linguistics for the study of the structure of an Object-Verb-Subject language.

(12) £6,400 for the Department of Phonetics and Linguistics for the linguistic study of 'clitics'.

(13) £74,268 for the Department of Political Economy (with the Universities of Birmingham and Warwick) for the study of taxation, incentives and the distribution of income.

(14) £1,600 for the Department of Political Economy for research into transmitted deprivation.

(15) £85 and £75 for the Department of Psychology for the travel expenses of exchange scientists.

(16) Research training support grants totalling £780.

SOUTH CAMDEN HEALTH DISTRICT

£5,000 for the Department of Human Genetics and Biometry as a contribution towards the genetic services of Galton Laboratory to patients at University College Hospital.

MR R.J. STOPFORD

A gift to the Museum of Egyptology of egyptological material which formerly belonged to his uncle, Mr J.T. Stopford, who worked with Sir Flinders Petrie in Egypt during 1910.

SWEET AND MAXWELL LTD

£25 p.a. to enable the value of the 'Maxwell Law Prize' to be increased from £50 to £75 per session.

TATE AND LYLE LTD

£300 for the Department of Chemical Engineering for a CASE award for the study of mixing and mass transfer in highly viscous fermentations.

U.N.E.S.C.O.

$2,000 for the Bartlett School of Architecture and Planning for the study of educational facilities in relation to local and regional physical planning.

UNITED KINGDOM ATOMIC ENERGY AUTHORITY

(1) £17,000 for the Department of Chemistry for the study of the theory of fast ion conduction.

(2) £1,800 and £450 for the Department of Physics and Astronomy for studies on atomic collisions.

(3) £6,319 for the Department of Statistics and Computer Science as a contribution to the cost of a data link from University College London to Norway.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT MISSION IN JORDAN

$141,661 for the Bartlett School of Architecture and Planning to provide the Amman Urban Region Planning Group with expert assistance required to design a training programme.

UNITED STATES AIR FORCE

(1) $18,270 for the Department of Electronic and Electrical Engineering for research on scanned active array radar.

(2) $8,500 for the Department of Physics and Astronomy for tropospheric and stratospheric tidal investigations.

(3) $2,300 for the Department of Electronic and Electrical Engineering for technology assessment of microwave semi-conductor devices.

UNITED STATES ARMY

$3,000 for the Department of Mathematics as a contribution towards the expenses of a conference on the Theory of Analytic Sets.

UNITED STATES PUBLIC HEALTH SERVICE

$3,000 for the Department of Physiology for a Fellowship Institution Allowance.

WATER RESEARCH CENTRE

£7,039 and £820 for the Department of Civil and Municipal Engineering for the development of a new flocculation test method.

THE WELLCOME TRUST

(1) £3,500 for the Department of Anatomy and Embryology (Sub-Department of the History of Medicine) for the study of the C19 vitalism/mechanism debate.

(2) £1,695 for the Department of Anatomy and Embryology for the study of behaviour of primordial germ cells in the mouse.

(3) £868 for the Department of Anatomy and Embryology for investigation of the process of synaptic transmission.

(4) £800 for the Department of Anatomy and Embryology for the study of the development of retinal ganglion cell axons in the chick embryo.

(5) £761 for the Department of Anatomy and Embryology for the study of neurology and the history of neurology.

(6) £610 for the Department of Anatomy and Embryology for a vacation scholarship for Dr E. Wright for a study of primary differentiation of nerve cells in the mammalian embryo.

(7) £400 for the Department of Anatomy and Embryology for the study of dorsal column nuclei.

(8) £374, £294 and £30 for the Department of Anatomy and Embryology for the study of purinergic nerves.

(9) £366, £305 and £244 for the Department of Anatomy and Embryology for three vacation scholarships.

(10) £2,778 for the Department of Biophysics for a research fellowship for Dr M. Tabak.

(11) £1,142 for the Department of Chemistry for the study of the association between the production of nerve growth factor in vivo and sexual function in the guinea pig.

(12) £1,200 p.a. for three years for the Department of Pharmacology for the study of the mechanism of action of anti-allergic drugs.

(13) £300 p.a. for three years for the Department of Pharmacology for a project on brain self-stimulation methods.

(14) £183 for the Department of Pharmacology for a vacation scholarship.

(15) £22,224 for the Department of Physiology for research on muscular contraction using nuclear magnetic resonance and other techniques.

(16) £660 for the Department of Physiology for a vacation scholarship.

(17) £1,368 and £1,168 for the Department of Zoology and Comparative Anatomy for the study of the site of action of immune response genes.

(The grant to the Department of Biophysics reported under item (9) in the Annual Report for 1976-77, page 134, was relinquished.)

EMERITUS PROFESSOR L.A. WILLOUGHBY (THE LATE)

An immediate donation by Mrs L.E. Willoughby of the silverware and silverplate bequeathed to her for her lifetime and thereafter to the College by her husband, the late Professor L.A. Willoughby.

XEROX CORPORATION

$7,000 for the Department of Electronic and Electrical Engineering for research on integrated optics.

GIFTS TO THE LIBRARY

MRS O. BONDY

A book of Hungarian woodcuts illustrating *La Divina Commedia.*

MISS JOAN BUDGEN

Books for the James Joyce Centre from the library of her father, Frank Budgen.

THE DOWAGER COUNTESS OF IDDESLEIGH

Two letters from Lord Brougham to Joseph Parkes.

DR RUTH ISSACHAROFF (THE LATE)

A bequest of 160 items for the Environmental Studies library.

MRS SUSAN MORRIS

A copy of *Libanius: Epistolae,* ed. J.C. Wolf, 1738 from the library of her husband, the late Dr John Morris.

MR F. LIONEL MONRO

Books for the James Joyce Centre.

HERR HEINRICH NOBEL

Two volumes entitled *Lichtenberg in England* edited by H.L. Gumbert.

MRS MARY PARR

A book for the James Joyce Centre.

MR PETER DU SAUTOY

Books for the James Joyce Centre.

SIR JOHN ROTHENSTEIN

Books on the history of art.

DR URSULA STEINBRECHER

Publications from the Deutsche Forschungsgemeinschaft.

THE RIGHT HON. LORD STRANG (THE LATE)

A bequest of 17 books.

APPENDIX VII

COLLEGE ACCOUNTS 1977–78

The Balance Sheet and the Income and Expenditure Account for the year will be found on pages 139-141.

BALANCE SHEET

LIABILITIES

The Capital Account reflects a net increase of £462.

ASSETS

Freehold and Leasehold Land and Building increased by £46,956 mainly reflecting the purchase of 15 Cromwell Road.

TRUST FUNDS

The College holds endowments in the form of 224 separate trust funds with a total value of £2,127,233. The funds yielded a total income of £236,000.

INCOME AND EXPENDITURE

The expenditure for the year exceeded income by £102,783. The balance carried forward on the Income and Expenditure Account was £339,798 (£442,581 1976-77).

Income exceeded that for 1976-77 by £1,471,394. Grants from the Court of the University decreased by £1,012,723. Fees increased by £1,972,688 and grants for research increased by £416,888.

Expenditure, including allocations to and from Reserves, was £1,646,233 more than in 1976-77. An additional £1,388,492 net was spent on academic departments and services. Maintenance of premises cost an additional £180,172 net. An additional £57,584 net was spent on administration, and miscellaneous expenditure increased by £19,985 net.

Income and expenditure under the main classifications in 1977-78 as compared with 1976-77 and with the corresponding year of the previous quinquennium, are shown in the following table.

EXPENDITURE	1972-73 £	%	1976-77 £	%	1977-78 £	%
Salaries and Pensions of Teaching Staff	3,442,553	34.0	6,247,666	33.5	6,722,726	33.1
Departmental Expenses, including Library	2,536,339	25.0	4,304,835	23.1	4,801,379	23.6
Research Grants	1,618,496	16.0	3,132,052	16.8	3,548,940	17.5
Maintenance of Premises	1,374,004	13.6	3,032,100	16.2	3,212,272	15.8
Administration	633,872	6.2	1,274,974	6.8	1,332,558	6.6
Selective Employment Tax	89,126	0.9	—	—	—	—
Other	437,050	4.3	667,234	3.6	687,219	3.4
	£10,131,440	100.0	£18,658,861	100.0	£20,305,094	100.0
INCOME						
Endowments	91,591	0.9	184,990	1.0	175,899	0.9
Grants	7,312,972	73.5	13,658,229	72.9	12,645,506	62.6
Donations	244,575	2.5	364,971	2.0	451,406	2.2
Fees	452,652	4.5	1,113,202	5.9	3,085,890	15.2
Grants for Research ..	1,618,496	16.3	3,132,052	16.7	3,548,940	17.6
Research Training Support Grants ..	45,962	0.5	58,440	0.3	58,080	0.3
Selective Employment Tax	89,126	0.9	—	—	—	—
Other	92,835	0.9	219,033	1.2	236,590	1.2
	£9,948,209	100.0	£18,730,917	100.0	£20,202,311	100.0

EXTRA-BUDGETARY ACTIVITIES

The College administers the finances of many research projects supported from outside sources. 524 were being pursued actively at 31 July 1978. Income and expenditure increased from £3,132,052 in 1976-77 to £3,548,940 in 1977-78.

UNIVERSITY COLLEGE LONDON

BALANCE SHEET 31 JULY 1978

31.7.77 £		£
16,243,950	Capital Account	16,244,412
37,918	Redemption Fund	39,921
3,028	Loan	1,025
16,284,896		16,285,358
3,723,690	Reserves and Amounts Set Aside	4,201,015
1,211,630	Earmarked Funds	1,832,408
1,267,458	Current Liabilities	1,241,143
22,487,674		23,559,924
2,012,185	Trust Funds	2,127,233

NOTE

Freehold and Leasehold Land and Buildings

(a) Freehold and leasehold land and buildings in the accounts do not include fixtures, furniture and equipment. The cost of these assets is written out of the accounts on purchase or on completion of a project against the corresponding grants or other monies received and are not therefore included in capital account.

(b) Freehold land and buildings are stated at a valuation made in 1959 on the basis of the then current land values and building costs with subsequent additions at cost or valuation, as estimated by the College authorities on a basis which excludes professional fees.

(c) There are commitments for future expenditure on capital projects which amount to £347,000 at 31 July 1978 (*1977 £937,000*).

31.7.77 £		£
16,070,086	Freehold Land and Buildings—See Note below	16,070,086
369,209	Leasehold Land and Buildings	416,165
16,439,295		16,486,251
25,757	Capital Works in Progress	129,556
2,305,136	Investments at lower of Cost and Market Value *(Market Value at 31 July 1978: £2,789,379; 31 July 1977: £2,305,136)*	2,717,505
1,202,974	Expenditure Recoverable from Grants	930,732
2,514,512	Current Assets	3,295,880
22,487,674		23,559,924
2.012.185	Trust Funds	2,127,233

£24,499,859		*£24,499,859*	
	£25,687,157		£25,687,157

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 JULY 1978

EXPENDITURE

1976-77 £		1977-78 £	£
	Administration		
968,970	Salaries	1,017,796	
232,995	Advertising, Printing, Stationery, Postage and Telephone	256,427	
73,009	Other Expenses (including Professional Fees)	59,290	
(1,274,974)			1,333,513
	Academic Departments		
6,031,044	Salaries of Teaching Staff	6,452,845	
1,774,602	Departmental Wages: Technical Staff	1,904,650	
624,745	Secretarial Staff	678,989	
1,120,296	Departmental & Laboratory Maintenance	1,223,526	
3,132,052	Research Expenditure covered by grants on Research Contracts (contra opposite)	3,548,940	
17,372	Other Expenditure	16,732	
(12,700,111)			13,825,682
	Academic Services		
329,370	Libraries: Salaries	344,527	
223,147	General Expenditure	286,349	
		630,876	
15,884	Central Photographic Service	16,700	
19,482	Audio Visual Aids	19,232	
13,442	Radiation Hazards	8,221	
(601,325)			675,029
	Maintenance of Premises		
646,012	Rates	703,065	
57,136	Insurance	63,001	
	Rents & other payments for use of buildings:		
33,502	Student Accommodation	31,065	
48,388	Other Buildings	59,656	
		90,721	
436,112	Heat, Light, Water and Power	480,947	
	Repairs and Maintenance of Buildings including amounts set aside for long-term maintenance	1,675,127	
1,401,020			
249,204	Wages of Porters and Attendants	273,623	
33,750	Other Expenses	52,505	
(2,905,124)			3,338,989
	General Educational		
14,230	Examinations	20,415	
38,365	Scholarships and Prizes	45,377	
12,734	Public Lectures	15,810	
14,000	Staff Attendance at Conferences	17,000	
38,309	Student Vacation Grants	52,385	
735	Miscellaneous	717	
(118,373)			193,704
184,990	**Endowments**		175,899
	Donations and Subscriptions (including Ministry of Overseas Development £100,500 – 1976-77 £87,815):		
	Appropriated for:		
9,488	Libraries	8,504	
11,837	Scholarships and Bursaries	22,353	
202,820	Salaries and Superannuation	330,103	
140,826	Departmental and Laboratory Maintenance	90,446	
(364,971)			451,406
	Grants from University Court		
11,881,000	General	11,444,000	
718,000	Supplementary	405,000	
(12,599,000)			11,849,000
	Earmarked Grants		
–	Computer Accounting System	2,536	
–	Food Industry Collaboration	14,000	
4,277	Hayter Committee	2,270	
39,579	Minor Building Projects	40,148	
24,883	M.Sc. Course in Ergonomics	25,267	
8,794	Parry	1,500	
646,012	Rates	703,065	
396	Small Grants – Humanities	120	
7,500	University College/Royal Free Medical Project – Administration	7,600	
350	Clinical Salary Revision	–	
9,233	Fees Waiver	–	
116,049	Former Institute of Computer Science	–	
6,483	Intercollegiate Service Facilities	–	
103,650	Pension Increase Order	–	
36,500	Supplementary Maintenance	–	
55,523	U.S.S. 2% Surcharge	–	
(1,059,229)			796,506
58,440	**Research Council Training Support Grants**		58,080
1,113,202	**Fees**		3,085,890
3,132,052	**Grants for Research, including research contracts (contra opposite)**		3,548,940
71,003	**Contributions for Services Rendered**		88,224
13,049	**College Properties – Rents receivable**		14,941
	Other Items:		
	Special Funds Appropriation:		
5,973	Earmarked Funds	11,043	
966	Other		

INCOME

1976-77 £		1977-78 £	£
184,990	**Endowments**		175,899
	Donations and Subscriptions (including Ministry of Overseas Development £100,500 – 1976-77 £87,815):		
	Appropriated for:		
9,488	Libraries	8,504	
11,837	Scholarships and Bursaries	22,353	
202,820	Salaries and Superannuation	330,103	
140,826	Departmental and Laboratory Maintenance	90,446	
(364,971)			451,406
	Grants from University Court		
11,881,000	General	11,444,000	
718,000	Supplementary	405,000	
(12,599,000)			11,849,000
	Earmarked Grants		
–	Computer Accounting System	2,536	
–	Food Industry Collaboration	14,000	
4,277	Hayter Committee	2,270	
39,579	Minor Building Projects	40,148	
24,883	M.Sc. Course in Ergonomics	25,267	
8,794	Parry	1,500	
646,012	Rates	703,065	
396	Small Grants – Humanities	120	
7,500	University College/Royal Free Medical Project – Administration	7,600	
350	Clinical Salary Revision	–	
9,233	Fees Waiver	–	
116,049	Former Institute of Computer Science	–	
6,483	Intercollegiate Service Facilities	–	
103,650	Pension Increase Order	–	
36,500	Supplementary Maintenance	–	
55,523	U.S.S. 2% Surcharge	–	
(1,059,229)			796,506
58,440	**Research Council Training Support Grants**		58,080
1,113,202	**Fees**		3,085,890
3,132,052	**Grants for Research, including research contracts (contra opposite)**		3,548,940
71,003	**Contributions for Services Rendered**		88,224
13,049	**College Properties – Rents receivable**		14,941
	Other Items:		
	Special Funds Appropriation:		
5,973	Earmarked Funds	11,043	
966	Other		

	Student Facilities and Amenities						
96,787	Grant to Students Union	189,049		147,373	Interest Receivable	126,538	
79,833	Collegiate Theatre and Shenley	27,763			*Less*: Transfer to		
4,301	Salaries: Wardens of Halls of Residence	3,096		(52,274)	College Fund	34,675	
53,898	Student Health Service	53,479					91,863
2,592	Students' Purposes Fund	3,044		32,943	Miscellaneous		30,519
744	Crabb Robinson and Ealing Hall Funds	694		(134,981)			133,425
12,828	Central Admissions Scheme	11,498					
4,236	Miscellaneous	7,675			Allocation from Reserves at 1 August 1977		
11,021	Student Counsellor Service	12,158			Revenue Grants:		
7,427	Careers Office	8,629		10,000	Administrative Staff Training	10,000	
–	Hardship Fund	75,000			Departmental and Laboratory		
(273,667)			392,085	294,862	Maintenance	414,237	
	Miscellaneous			6,691	Academic Services	53,811	
216,622	Staff Pensions	269,881		49,949	Repairs and Maintenance	187,534	
3,446	Grants from Benevolent Funds	4,898		129,796	Minor Works	22,868	
1,207	Interest on Overdrafts, etc.	903		4,155	Student Vacation Grants	15,846	
28,523	Sundries	33,686		5,587	Miscellaneous	6,069	
10,000	150th Anniversary	1,000			Development Programme:		
5,500	College Collection	–		41,694	Relocation and Other Costs	41,694	
11,403	Refectory: Deficit met by College	–		(542,734)			752,059
(276,701)			310,368		Earmarked Funds:		
121,463	Transfer to Equipment and Furniture		33,680	(4,161)	Minor Building Projects		(6,251)
				2,938	Small Group Teaching		2,938
	Capital Expenditure met from Income:			19,272,428			20,951,057
41,669	Minor Building Projects	39,138					
138,219	Other	19,466					
			58,604				
18.451.626			20,119,654				
	Allocation to Reserves at 31 July 1978						
	Revenue Grants						
10,000	Administrative Staff Training	9,045					
–	Academic Departments	14,000					
	Departmental and Laboratory						
414,237	Maintenance	647,083					
53,811	Academic Services	109,418					
187,534	Repairs and Maintenance of Building	61,713					
22,868	Minor Works	38,259					
15,846	Student Vacation Grants	11,461					
6,069	Miscellaneous	3,816					
	Development Programme:						
41,694	Relocation and Other Costs	41,694					
752,059			936,489				
	Earmarked Funds						
(6,251)	Minor Building Projects		(5,241)				
2,938	Small Group Teaching		2,938				
19,200,372			21,053,840				
72,056	Excess of Income over Expenditure for the Year		–				
£19,272,428			£21,053,840	£19,272,428			£21,053,840
	Excess of Expenditure over Income for the Year		102,783		Excess of Expenditure Over Income for the Year		102,783
	Balance at 31 July 1978 Carried to Reserve						
231,740	Committed	256,918					
210,841	Unappropriated	82,880		370,525	Balance at 1 August 1977		442,581
			339,798	72,056	Excess of Income and Expenditure for the Year		–
£442,581			£442,581	£442,581			£442,581